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MODEL CAR Science

AUGUST, 1970

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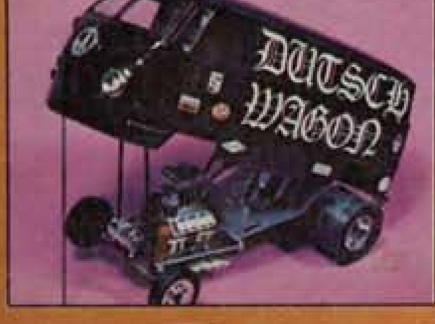
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MONOGRAM'S "OFF-ROAD A-BONE"



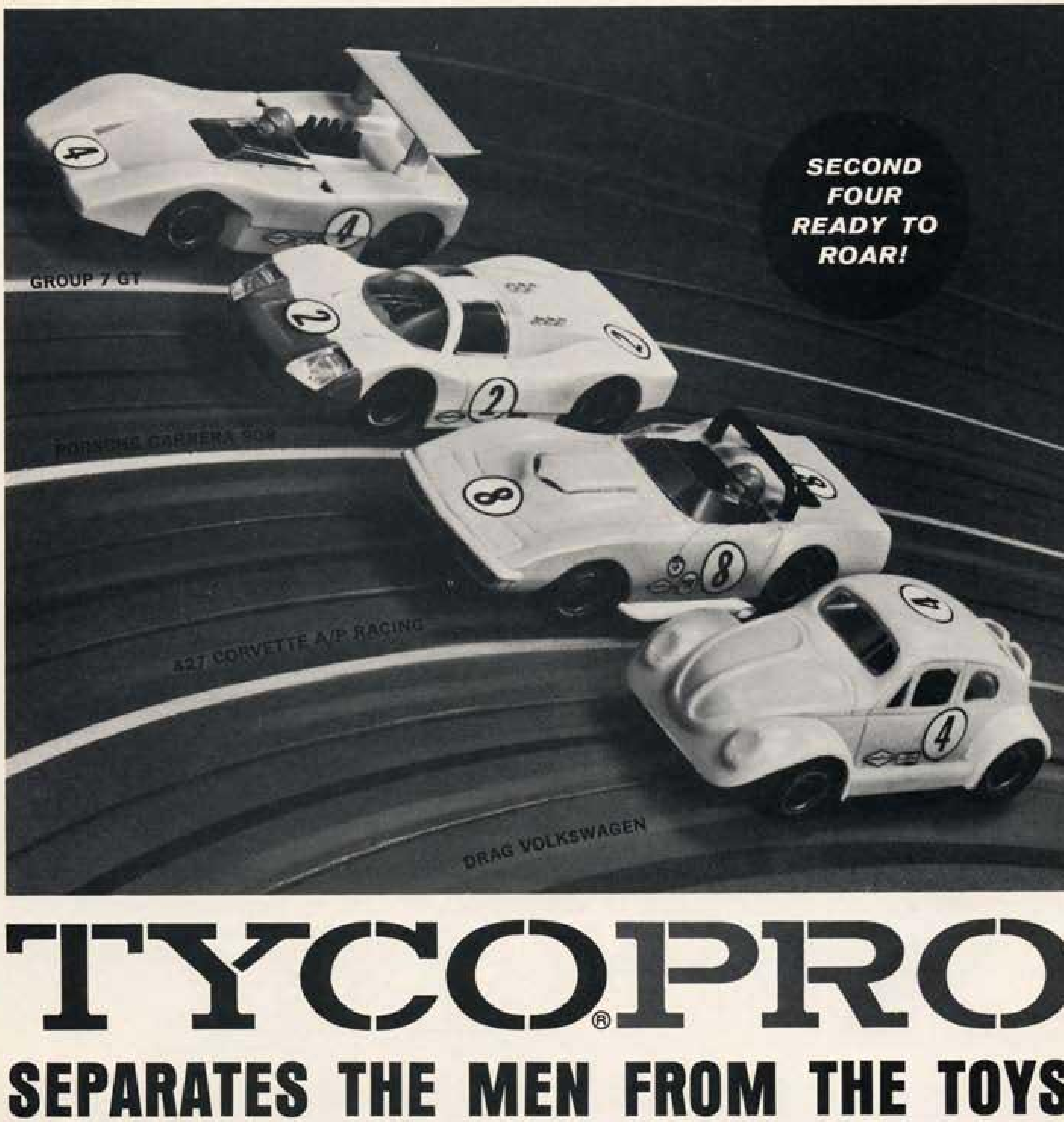
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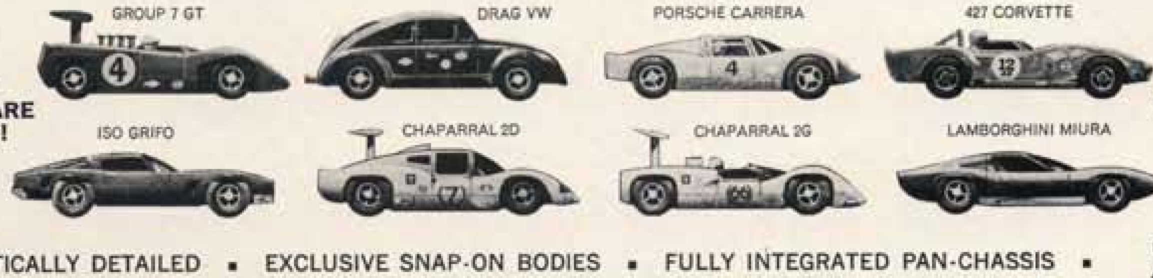


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MODEL CAR Science

August 1970

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"The Official Voice of NAMRA-HOCCI"

CONTENTS

VOLUME 8, NUMBER 8

MODEL CAR SCIENCE is published monthly by Delta Magazines, Inc. Executive offices, 131 S. Barrington Place, Los Angeles, California 90049. Telephone 213/476-3004. Single copy price: 50 cents. Second class postage paid at Sparta, Illinois. Subscription rate: 12 issues for $5.00, U.S. and possessions; 12 issues for $6.00, all foreign countries and Canada. All editorial contributions and advertising inquiries should be addressed to Raymond Hoy, Editor and Advertising Manager, P.O. Box 1821, Thousand Oaks, California 91360. Telephone 805/495-7282. Unsolicited contributions should be accompanied by return postage and Delta Magazines, Inc. assumes no responsibility for loss or damage to such unsolicited material. Printed in U.S.A.

TECH SHEET

As I survey the hobby industry I am impressed by the quality of the merchandise available and the prices being quoted. The industry seems to have stabilized and I think a great deal of this change from runaway high prices is due to N.C.C. group racing programs.

Let's stop and think about this for a minute. Take group 20 cars, for instance. You're getting all the quality features of the old 25 and 30 dollar motors. The group 20 motors are actually better than their older, expensive counterparts because, in addition to the thin .005 or .007 lamination material, you're getting the green insulation (Mura's motors) or in the case of Champion, brown insulation, which makes them almost blow-proof and with a much better Kirkwood comm than we had available back in the old (expensive) days, too.

You're getting the Arco or Mura B magnets, high temp endbells and everything else, plus improvements the older motors never had, all for a seven dollar price tag.

Next, take a look at frames, even down to the group 12 cars. Thumb back through old issues of your magazines and see what the scratchbuilt pro chassis looked like and compare them to say a group 12 Cobra chassis of today. You can find this same similarity in Riggen's or Champion's, or whoever's chassis. Wheels, tires, axles, it's all the same as the big pro stuff of a while back and now it's all combined in a kit at a reasonable price. All the quality is there but at a cheaper price. And bear in mind this has all been accomplished in an era when everything else from hamburgers to coffee costs more!

The surprising thing to me is the group 15 and group 12 motors. By the rules of N.C.C. these motors must be left unbalanced and unepoxied, yet they run surprisingly well, turning about 70,000 rpm and with very few motors ever "blowing." They don't run hot in spite of not being balanced, and, because of much better quality control by both Mura and Champion, the armatures are not really all that far out of balance. I can remember when it would have been impossible to wind a 28 wire motor without applying epoxy, and if it wasn't balanced the comm was sure to "blow."

Time was when the old "French" magnets were all that was available unless you wanted to go to "Hemi" magnets. Then came the first Champion Arco's, which were better. Improvements included Super Arco's (then D.Z.) and now the new Blue Dot Arcos. I tested out the Blue Dots to see if they were stronger than D.Z.'s, and they did give a very slight increased gauss reading when cold. But the real difference between the Blue Dot and Champion's D.Z.'s is that when the motors get hot the Blue Dots retained their strength better than D.Z.'s, which indicates that there has been a change in the magnetic material used.

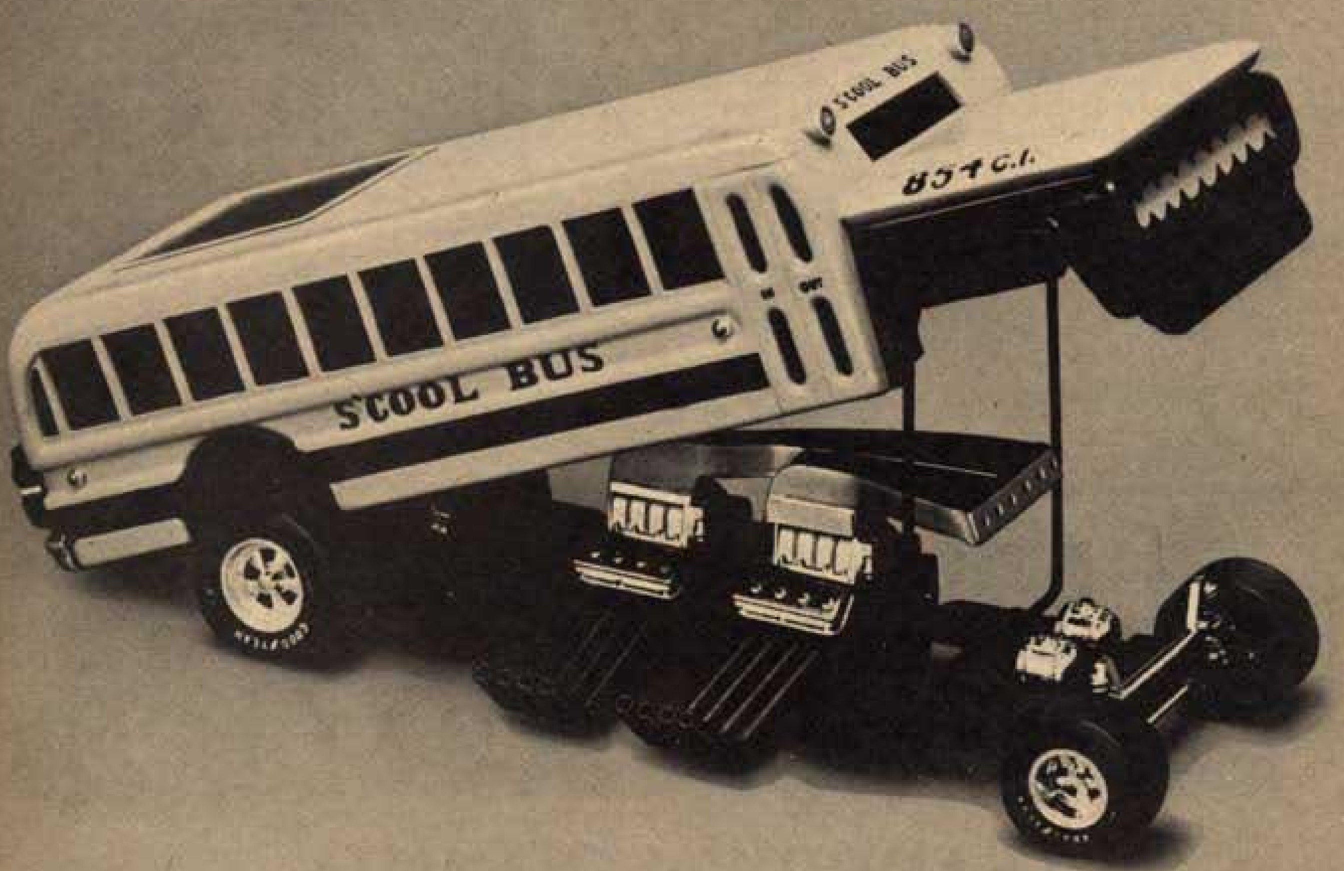
You see, as a magnet gets hot it loses some of its gauss, which affects low end torque, and naturally its braking ability. So, if you really want to test a magnet's characteristics, it should be tested cold and then at its operating temperature in order to draw some conclusions about its real worth.

Curiously, the same week as the Blue Dots hit the market, Mura came out with what he calls the MU6C magnet, which, according to the flyer I read, makes about the same claims as Champion does with their Blue Dots. So I test the MU6C in the same manner, cold and hot, etc., against the regular Mura B magnets, and lo and behold, the "C's" exhibit the same characteristics as the Blue Dots did against the D.Z.'s.

You can draw your own conclusions, the first being that both new magnets are made of the same material, by the same magnet company, only in different configurations to suit each company's specs. You may or may not be right, but personally I wouldn't speculate either way. I can only say that after examining both brands of magnets the Mura's appear darker than the Blue Dots so you can carry on from there. It is obvious that both new magnets must have a higher oersted reading because both magnets appear to stand higher temperatures with less gauss loss than their respective predecessors. In any event, you're getting better quality for your money now than you did before, and that we are all in favor of.

The other big Champion announcement was the mini H.O. Arco. Well, we've waited about a year for these H.O. magnets and I guess it was worth the waiting time. The Aurora Wild-One and Tuff-One have come out since Champion made its first announcement that it intended to put out H.O. magnets to fit Aurora cars. The Tuff-One has pretty good magnets in it now, so I honestly figured Champion was too late bringing out their H.O. Arco magnets. First off you will find that the Arcos "feel" stronger than the Tuff-One's magnets (the Tuff-Ones have much better magnets than stock Aurora magnets). In my best running Tuff-One car, I got 43,000 rpm and 20 feet per second on the dyno. Then I disassembled the car and removed the top plate and replaced the magnets with the Arcos and reassembled the

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car, making sure I didn't disturb the brushes. The free running rpm went down to 36,7000 rpm, but on the dyno the car registered 22 feet per second, and that, dear friends, is what you call increasing torque, because now the car whips up to that 22 feet per second a lot quicker than when it had the Tuff-One magnets. It doesn't matter what the top free running rpm is as long as it is accompanied by a good low end torque because torque is what makes the car go fast.

When we make a change of just one component, as we did with the magnets, the free-running rpm figures become significant, but when making measurements on a dyno the figures are misleading if you are comparing different brands of cars. Although the increase in speed registered with the Arco is a valid measure, and track testing proves the Arco car actually is fast and by more than the dyno figures suggest.

I know this sounds all very complicated but it actually isn't when we begin to analyze just what we are measuring on the dyno and how these figures are obtained.

By way of explanation remember I stated that the Tyco car registered 16 feet per second on the dyno and that this was the fastest H.O. car I had tested at that time. Well that last statement still holds true in spite of the above-mentioned dyno figures of 20 and 22 feet per second, because the dyno is measuring the car's speed at the rear wheels *but* against a small amount of friction. If I were to increase this friction to match the actual torque necessary to propel the average H.O. car, the Tyco car would figure a higher reading in feet per second than any pancake type of motor such as Aurora uses. The explanation is, that under actual track conditions, the pancake-type motor design does not develop as much torque as the Mabuchi-type motor, in spite of the fact that the Aurora-type motor will be wound hotter (lower ohm reading per pole) than say a Tyco Mabuchi motor.

To state all this very simply, the Tyco car, at 13 ohms, is faster on the track than even an Arco-equipped Aurora with a Tuff-One armature at 5-1/2 ohms. If you were to rewind the Tyco to a comparable 5-1/2 ohms, using about No. 35 wire and maybe 125 turns, plus shimming the magnets in about 7 or 8 thousandths on each side, the Tyco car would run away and hide from just about anything on the track, including a stock Tyco, providing you could control the horsepower *and* you had a large enough track so you could make use of the speed.

This brings up a point and an experience I had recently. We have both seen it written that the Tyco car is fast but it won't handle according to some so-called "authorities." Well the other day I was talking to a fella who made the same statement about the Tyco cars, and I asked him if he had added weight to the drop arm and his answer was "no," he hadn't.

Well, to make a long story short, I ended up going over to his house (to fix some electrical problems originally) and you should have seen the postage stamp size layout he was trying to run his cars on! You wouldn't believe it! Everything was six and nine inch flat turns, with the longest straight being about 3-1/2 feet. And the whole board was a maze of track sections. He had to weight his Aurora cars down so much they literally crawled in spite of all being rewinds.

I ended up inviting him over to my house to run some of my cars, and also his so-called "ill handling Tyco." My track has long straights (16 feet) and gently-banked curves without a lot of tricky sections. It's strictly a high-speed layout and he found out that the Tyco doesn't handle as bad as he thought, just as is, and adding weight to the droparm improved things con-

CONTINUED on page 66

QUESTION SESSION

Q I have seen so many pictures of models with paint jobs that the colors sort of blend together and separate. What is this called and how do you do it? Also, I would like to know the best way to tint windows.

Bradley Meidinger
Cranbrook, B.C.

A *This painting process is known as "fogging" and can be made to look very realistic on a model. The idea is to end one color at a given point by spraying past a piece of cardboard held next to the car. Start the next color at the piece of cardboard, but allow the paint to overlap the previous color by at least 1/4". This works best if one or both of the colors are candy. Spray the second coat while the first coat is still wet to ensure a good blend. There are two very simple methods of tinting glass. The best way is to dye them in Rit fabric dye. Follow the instructions for preparing the dye and dunk the window in the boiling solution for 15 seconds and remove it. Keep repeating this process until you reach the desired shade. A simpler method is to spray the window with one thin coat of candy apple paint of the desired color. Allow it to dry for several hours and presto, you've got a tinted window, a little dark, but still transparent.*

Q I am an H.O. buff, but no one understands me. I need to be with a club of racers so I'm not all alone in the world. If I'm one of those ten more people you need to open up a local racetrack, I'd be very happy. Please, if there is one, send me some info on a local club or just give me some names of people I can write to.

John Hubbard
5160 Mount Royal Dr.
Los Angeles, Calif. 90041

Q Help! I need an engine to fit the Chevrolet Impala that comes in AMT's Chevelle Drag Kit (will buy another kit if needed). Also, the slicks that come in AMT, MPC and JoHan kits aren't wide enough to look real on my cars. Is there any way I can make, or get, wider slicks?

Mark Ganzone
Cuy Falls, Ohio

A *AMT's 1970 Chevy Impala, Camaro and Corvette kits have the big 454 Rat motor that will fit your car with little or no modification. I can't believe that you'd want slicks bigger than those included in the kit, but I did some searching anyway, and found that MPC's Galloping Ghost II has some monstrous 11.75 X 16 slicks and 16 inch mags. If you want 'em any bigger, you'll have to make them from two pair taped together with electrical tape.*

Q I would like to know where I could get extra parts for model cars without buying a complete kit.

Thomas Levandusky
Myerstown, Pa.

Q I would like to know where I could get a working drag engine, shaft, rear wheels, axle and a front wheel system for a '55 Chevy Nomad. I have been to hobby shops and they said I would have to buy a whole car. Is this true or not?

Philip P. Nolan
Baltimore, Maryland

A *I'm afraid that you will have to buy a kit to get the parts you need since Revell, Aurora and AMT have quit producing their accessory parts kits. I know that Revell has considered re-issuing their line if enough people are interested. Drop a note to Mr. Don Ernst, c/o Revell, Inc., Dept. MCS, 4223 Glencoe Ave., Venice, Calif. 90291.*

Q I have entered lots of "Model of the Month" contests, but I never seem to get into any. Could you tell me what the major requirements are and the amount of detail required.

Peter Wingfield
Yonkers, N.Y.

A *Many entries are refused simply because the entrant failed to comply with our simple rules. We need clear, uncluttered black and white photographs printed on glossy paper (Poloroid pictures, except Swinger, will be accepted). Type or print as much information about the car as possible, including the paint scheme. We can't return any photographs since all pictures automatically become the property of MCS. No minimum amount of detail is required, but obviously a well detailed car has an advantage in gaining points toward winning.*

Q *Model Car Science* is, in my opinion, the finest model magazine on the market, but it simply does not have enough slot racing to suit me. Is there a publication on the market that is devoted strictly to slot racing?

Don Fletchic
Oak Park, Illinois

A *There is now, Don. A new slot racing newspaper titled* **Miniature Auto Racing** *is available (sold by subscription only) and it's magnificent! It's devoted to H.O., 1/32 and 1/24 racing, and it's a hard-core enthusiast's newspaper, through and through! I'll be writing for it, as will just about every "name" slot racing writer in the country! It's "meaty" stuff, believe me ("how to" articles on tuning, building, designing, etc.), and you won't want to miss even one issue. Send your subscription money ($1.00 for three months; $2.00 for six months; or $4.00 for 12 months) to Pacific Publishing Group, P.O. Box 1821, Thousand Oaks, California 91360. This paper has the "blessing" of MCS, so you know you can't go wrong. The owners of the paper have a promotional plan scheduled for 1970 that should really put slot racing back on the map, and this includes a promotional film for television, plus contests with the big car people, etc. They've a national championship series planned for all branches of road racing (and all scales) plus drag racing! Furthermore, a land speed record contest is planned which should simply knock everyone out! Send your subscription to them, NOW!* **Model Car Science** *has, in our (admittedly) biased opinion, the very best slot racing articles of any* **magazine** *in the country, but, because of the very nature of the magazine distribution scene, it is impossible to get information to you until three months after it occurs (***all** *magazines are in the same boat). A newspaper gets fresh information to you just a few days after new designs, etc., are born. Magazines have their place in the scheme of things, of course, and should, in our opinion, deal strongly in basic "how to" stories rather than try to be a "news" vehicle, which is nearly impossible due to the time lag. Therefore, you'll continue to get a lot of good "how to" slot racing articles in MCS in the future.*

SMALL STUFF

By Bill Von Staden

Well over a year ago, in this column, Champion Arco magnets were first mentioned. The news of their strength spread throughout the land. There wasn't an HO racer anywhere who wasn't anxious to get his hands on a pair. But September 15, the proposed release date, came and went. Still no Arcos. Days, weeks, even months passed, with no Arcos available to the public. A year ago, nothing could even be compared with the Arcos, they were so strong. Now you could compare them with the Aurora Tuff One magnets. I said compare, not match. The Arcos are better than Tuff magnets, which are better than Muras, which are better than LaGankes, in my opinion. Why all this talk about Arcos when we all know it to be a dead issue? Well, it WAS a dead issue but is no longer. These super-strong magnets are again being considered by Champion, and maybe this time they'll become a reality. Now I ask you, all HO racers, if they aren't out by the time you read this, please write to Champion and tell them to release the HO Arcos. It will be worth it.

As you should know by now, Jim Kirby (1/24th scale clear body man) has entered the field of HO clear plastic bodies. His first numbers are the McLaren M8C, Autocoast Ti-22, Ferrari 512/S (show car), and the Plymouth Road Runner Superbird. The Camaro, Firebird and Volkswagen bug will follow. I've received many letters about the McLaren and the Autocoast, so I'm sure they will be popular. By the way, the Autocoast is that handling body that the 1/24th scale boys feel is ideal. The Kirby bodies I've seen were very good looking, with nice detail. The Superbird is a bit large, being 1/4" longer and 1/8" wider than Lancer's Daytona! Other than that, I have no complaints. (The Superbird does fit nicely over a TycoPro chassis, however.) These bodies sell for 29 cents, unpainted, and for 79 cents when painted and trimmed. Brackets are not included in either case. Most serious HO racers are using pin and tubing mounts with clear bodies anyway, so I guess it's no great loss.

Mura now has hop-up parts for the TycoPro. A brass handling pan, a special armature and silver brushes are among the first items released. The pan is quite heavy, has an armature ventilation hole in it, and has a tongue extending from its front which takes the place of the Tyco drop arm! A hole in the tongue allows you to mount the flag right on the pan, doing away with the drop arm. Although I have yet to test it myself, early reports show this is definitely the way to go with your TycoPro. Price is 79 cents. The armature, a balanced, rewound, polished and epoxied unit, sells for $2.49. It runs very smoothly, and really revs way up there. Using this armature, the Tyco is still just as hard to drive, but I guess we can't ask Mura to do everything for us. Their silver brushes are another story. Just like the Mura silver brushes for the Aurora T-Jet, they are slightly too large in diameter. They tend to get hung up in the brush tube. As such, I can't really say how they perform.

Mura also has a hop-up kit for the T-Jet going for $4.95. You get magnets, tiger tailed pickups, brushes, a bat pan and a balanced stock armature. The whole deal is not really that bad, but after spending five bucks on it, you still have to buy a car to hang all the stuff on. For exactly $4.98 you can buy an Aurora Tuff One, AJ's pan, and a pair of AJ's 007 silicones. What can I say?

The new LaGanke parts for the TycoPro are really boss! I'm most impressed by the set-screw wheels. Get this, for only $1.25 (compared to AJ's $1.79) you get two quarter-inch wide aluminum hubs with set screws, an axle, an allen wrench and your choice of either sponge or silicone tires. The set screws go into the hubs UNDER



"Model cars aren't enough of a hobby; now it's model fireworks!"



"You've brought a new model home? That's nice, son."

the tires. Thus you must remove the tires to get at them. This can get tricky with the silicones, because they could break, but you must admit it is ingenious. It's the only way to have the tires a full 1/4" wide and still keep the maximum width inside 1-1/4". The only thing I'd like to see changed is the inclusion of three set screws, just in case. But this goes for AJ's ($1.79) and Champion's ($1.49) as well.

LaGanke also has pop-on sponge tires for the TycoPro. They aren't a full 1/4" wide, but they are as wide as the Tyco hubs, price is just 49 cents. The sponge itself is very soft and gives excellent bite when cleaned or gooped. Brass drop arm weights are 30 cents (regular) and 50 cents (large). LaGanke didn't forget the Aurora T-Jet, either, but maybe he should have in this case. His 89 cents nickel-plated stainless steel looks impressive, but the curled rear edges of the pickups tend to touch the pan and short out the car. Let's hope I had a "pre-production" sample!

One company I wish would take the HO plunge is Dynamic. Their 1/24th scale shells are really sano. If they would offer some clear HO shells with the same great features, I'm sure they'd sell. Things like Lexan construction, including decals and an interior are what we need in HO. Come to think of it, Lexan HO bodies would be great if anybody put them out. Lancer and Jim Kirby, are you listening???

Okay, H.O. buffs, are you ready for this bit of tremendous news? Here goes! There's a brand new monthly slot racing newspaper on the market (sold by subscription only) devoted to H.O. (and a lot of it!), 1/32, and 1/24 racing. It's jammed with stuff you have to know to be a real racer, stuff like tuning and driving tips, major chassis construction articles, motor maintenance, tuning and "full housing," not to mention track building articles, pieces on how to build scenery, etc. I mean, it's loaded and it's so inexpensive you can't afford to pass it up.

Think I'm kidding? Hear this: a three month subscription costs just $1.00; six month subscription, $3.00; and a twelve month subscription, $4.00. You'll find the world's top "name" writers in this new newspaper each month, which is titled "Miniature Auto Racing." Yes, (blush) old Unca Bill will be there, along with Tom Malone, Brick Price, and on and on.

This newspaper has the official "blessing" of *Model Car Science*, so you can't go wrong. Send your dough now to: Pacific Publishing Group, P.O. Box 1821, Thousand Oaks, Calif. 91360. Tell 'em old Bill Von Staden sent you!

Whatever Happened To . . . . Dept.

When the Aurora Formula One cars were about to be introduced, there were *six*, count 'em six, proposed bodies. We have the Repco Brabham and the McLaren BRM, but whatever happened to the Ferrari, the Lotus, and the other two? And don't tell us the F1 series is a dead issue, Aurora. You wouldn't have draped that nice new '32 Ford Pickup body over one if it was.

A long time ago, LaGanke was supposed to be producing Formula One Tiger Arms and brass bearings for the F1 chassis. Now all they have is some brushes and a do-it-yourself hop-up kit. What happened, LaGanke???

AJs, you said many moons ago that your all-new HO car would be ready soon. How long can it take to correct some motor problems? That is the trouble, isn't it?

Hobby House, whatever happened to those super-soft super tires you ALMOST brought out for the TycoPro? (Richard, whatever made you think these wouldn't sell?)

Lancer, long ago you were said to be making clear plastic HO bodies packaged with a driver/interior and a decal sheet. They were reportedly going to sell for 49 cents, but they never appeared. What happened???

No More Excuses Dept.

Manufacturers, listed below are *all* the specs for the three most-wanted cars in HO. After this, there will be no excuse for their cars not to exist in HO scale. Got that? NO EXCUSE!

Specifications Table

Porsche 917 (Wyer 1970)

Wheelbase, in.	90.6
Width	74.0
Overall Length	165.0
Height	36.2

Ferrari 512/S

Wheelbase, in.	94.4
Width	78.7
Overall length	159.8
Height	38.2

Mercedes Benz C111 Mk 2

Wheelbase, in.	103.2
Width	71.9
Overall length	174.8
Height	44.3

REMARKS

Improved version of '69 car. Has more efficient tail and redesigned suspension system. Currently using 4.5 litre engine; will go to 5.0 if necessary.

New model based on 312 & 612, but has radiators in rear fender line.

Now using 4-rotor wankel engine rather than 3-rotor. Top speed of 186, will probably see production, and maybe competition.

Hot Tip of the Month

All of you who thought Parma made great controllers only, are in for a pleasant surprise. Write to them and request a price sheet and you'll see what I mean. They carry everything from Faller HO cars to spare commutator brushes for your Dremel tool! See you next month.



"I checked around and not a guy in the place can take you for the first half lap!"

Charlie just won the big one at Indianapolis.



That makes three weekends in a row for Charlie. At this rate, it won't be long until he'll be taking on the terror of Elm Street, "Flash" Ferguson.

Asked in the Winner's Circle about the secret of his coveted driving style, Charlie—with the roar of the .19 cu. in. engines still in his ears and the feel of the road still in his hands — just smiled, lifted his goggles, and said it all in one word.

"Cobra."

"Cobra?" — you could hear the crowd buzzing to itself. "What's a Cobra?"

If they only knew. Cobra is Orbit Electronics' new radio control system — the first to be designed exclusively for race cars. Charlie didn't have to buy a 3-channel or 4-channel "hand-me-down" stick system made originally for aircraft guidance.

Instead, his Cobra offers unique features vital only to car handling: cam-action steering, strip-resistant servo gears, changeable crystals, and detented gear shift control. Just to name a few.

For free detailed literature and the name of your local Cobra dealer, write today: Orbit Electronics, Inc. / A Datatron Company / 11601 Anabel Avenue / Garden Grove, California 92640.

Then watch out for Charlie!

Cobra



Pre-formed parts make this 1/32 Lola a quick-built Can-Am winner

By Robert Schleicher

LOLA-WINDER



One of the factors that keeps 1/32 scale home racing growing ever larger each year is the sheer *fun* of it all! To the home racing fan, the friendly conversation is as much fun as the actual racing. Drivers and corner marshalls all know each other and, as a result, the evening's races are more like a Friday night's poker session than all-out competition. Among such home racers and clubs you'll find all types of model car racing fans ranging from those who do little but drive, to those that do little but build. The level of competition is often loose enough to allow either man an equal chance at a win – you don't have to be both a good driver and a super-builder to have a winning chance. The car we describe is primarily designed for those who would rather drive than build.

The flat pan design we selected for our easy-build anglewinder has been a proven winner at several 1/32 scale clubs and home raceways. The thick brass pan gets as much of the weight concentrated down low as possible. The anglewinder motor/gear mounting concentrates the weight of the motor in the most ideal location, keeps gear friction to a minimum, and prevents motor created torque reactions from upsetting the car's handling through the corners. It's a simple package of proven ideas designed to be built in one evening with a bare minimum of tuning troubles on the track.

For most short home raceways, the 8/34 pinion/crown gear combination we have selected will be just right. For really tight tracks, however, you might want to substitute a seven-tooth pinion gear. The weight distribution of the car should be just perfect, as built. If you find the car a bit too much to handle, try one tooth less on the pinion gear rather than piling on the weight. There's ample power and revs in that "short stack" Mura motor for either home raceway or the biggest banked commercial shop raceway. The car handles and jets. It's up to you to align all of the axles, lube it, and learn to drive it well enough to win.

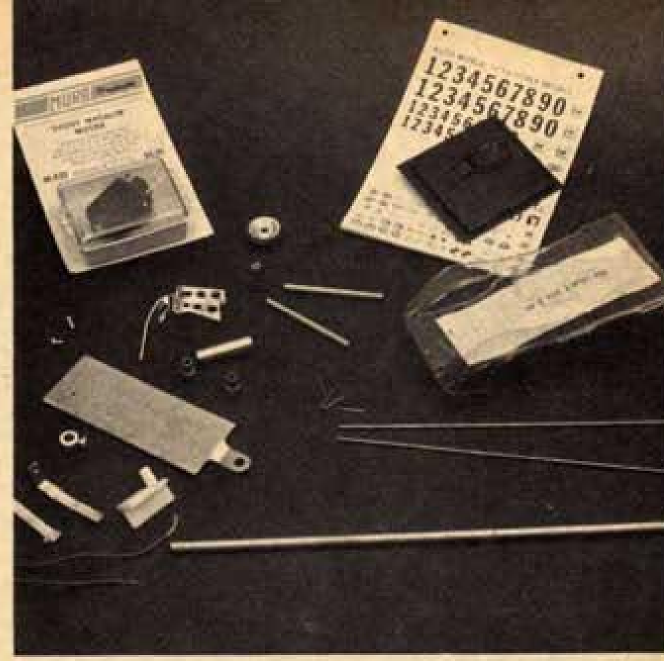
BILL OF MATERIALS

DESCRIPTION	PRICE
Mura Short Magnum No. M433 motor	$ 9.95
Champion 1/24 drop arm No. 2803	.98
Champion 1/24 angle mount No. 293-1	.98
Dynamic 34 tooth anglewinder gear	1.10
Dynamic 8 tooth pinion gear	.39
Associated "Jet" pickup & braid	.50
Lancer Lola T-162 clear body	1.49
K&S 1/16" brass tube	.15
K&S 5/32" brass tube	.25
Mura pickup lead wires	.34
AJ's No. F31 front tires and wheels	.89
AJ's No. SK-2 rear wheel, tire, axle	1.00
Auto World decal sheet	.35
Common straight pins to mount body	.00
2-inch straight axle	.35
Dynamic No. 750 pickup collar	.15
No. 2 self-tapping screws	.05
Approximate total*	$18.92

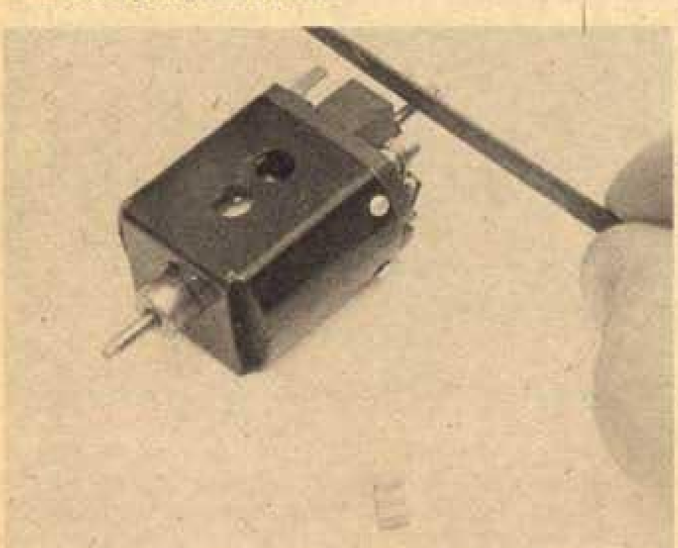
*NOTE: Prices can vary from area to area and depending on exact brand. All are subject to change without notice.



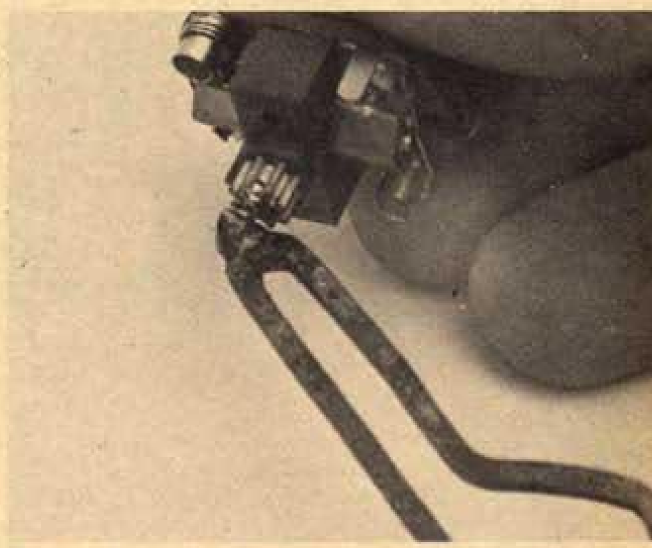
Here's one of the easiest cars you could build with real win-potential. You'll need a 60-watt (or larger) soldering iron, solder, flux, jeweler's round and flat files, razor saw, needlenose pliers, and a ruler.



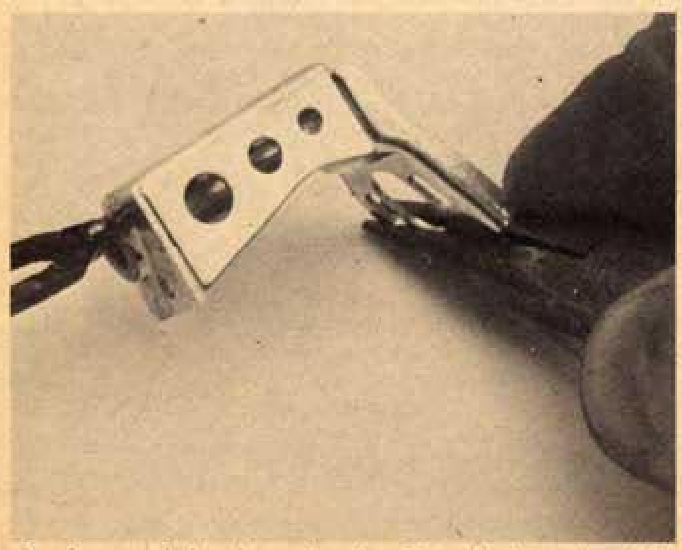
Most commercial raceways can supply the complete parts assortment from their shelves. The bill of materials lists each item.



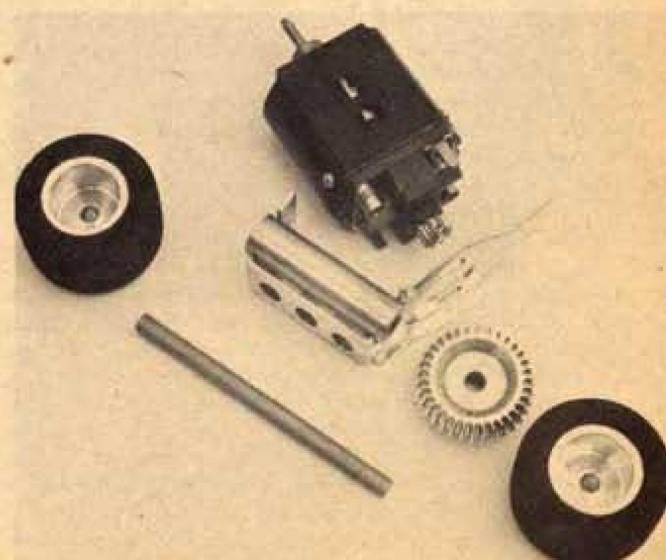
Cut the pinion gear in half and slice off the end of the motor shaft to just reach the end of the shortened gear. File smooth.



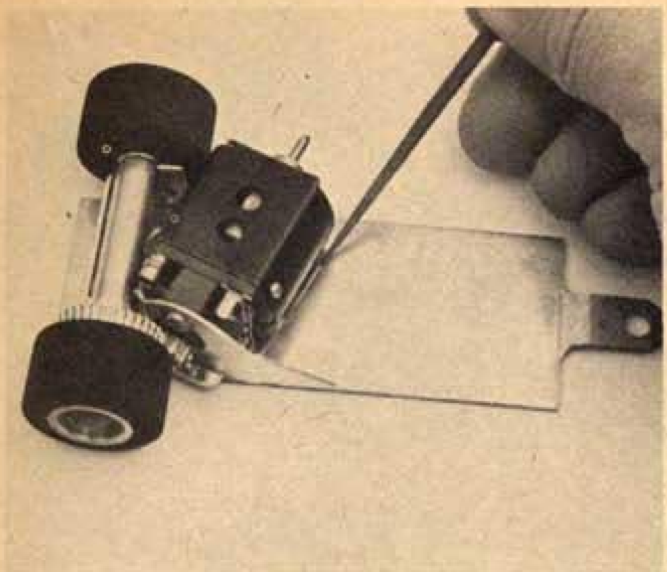
Apply a dab of flux, and solder the gear to the motor shaft. Use just a drop of solder to keep it from flowing into the teeth.



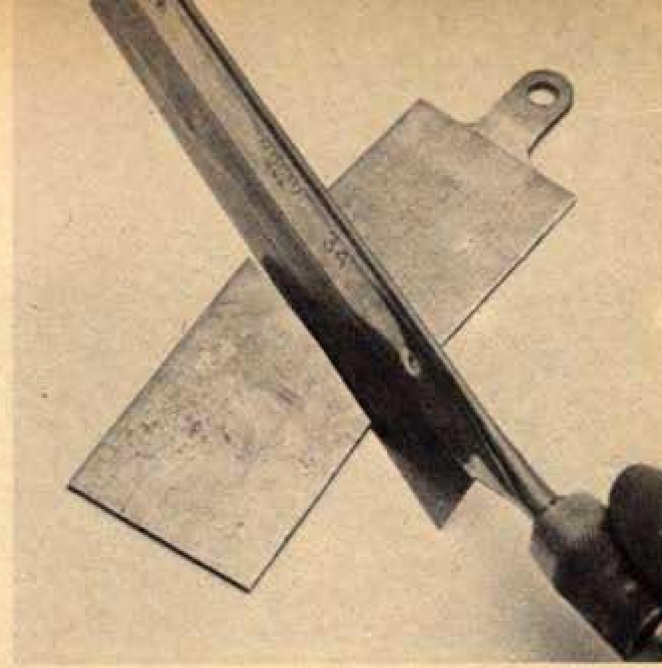
Bearings and bearing tube in Champion's anglewinder motor mount must be soldered together. Bearing faces are flush with tube.



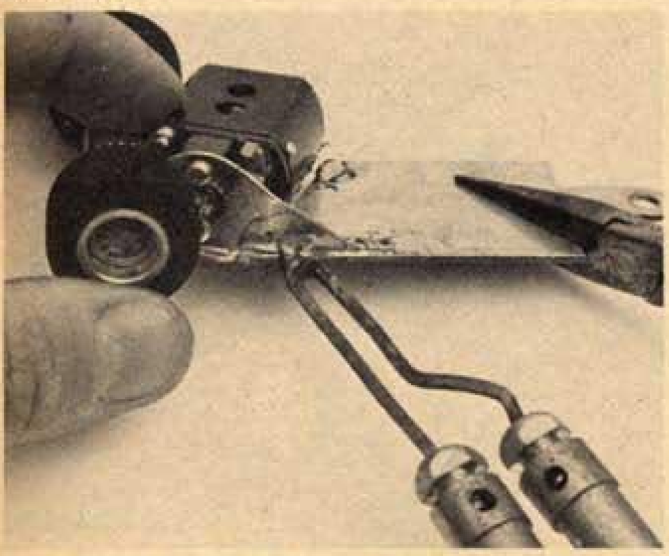
AJ's wheel, tire and axle kit is used with Dynamic's anglewinder gear. File flat spots on axle at each setscrew.



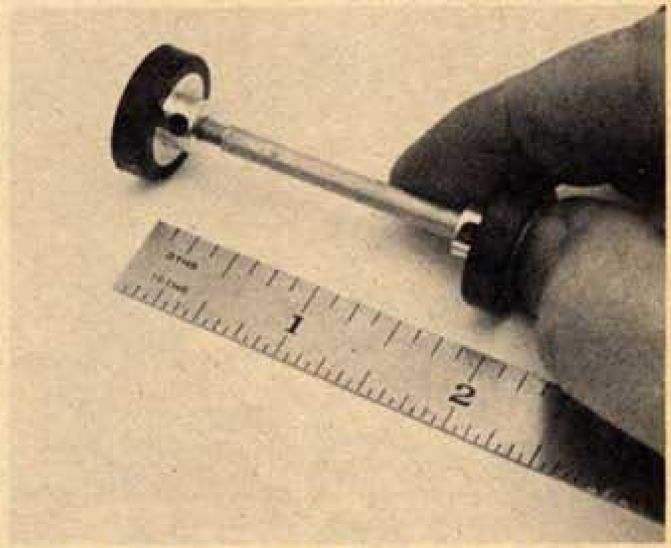
Assemble motor and axle pieces and adjust for free running. Lay assembly over the Champion drop arm as shown and mark edge.



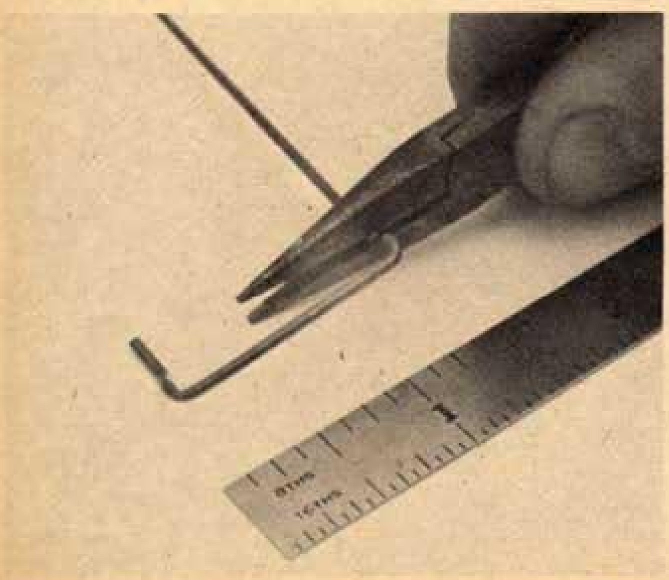
Cut off rear portion of Champion drop arm on scribed mark. Use a razor saw or a hacksaw. Smooth cut with jeweler's file.



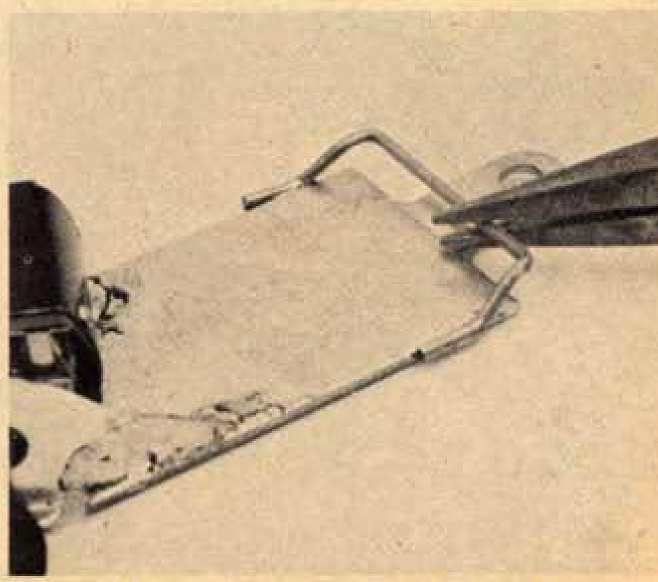
Solder motor mounting bracket and front edge of motor to cut drop arm. Arm should be level with the bottom of motor.



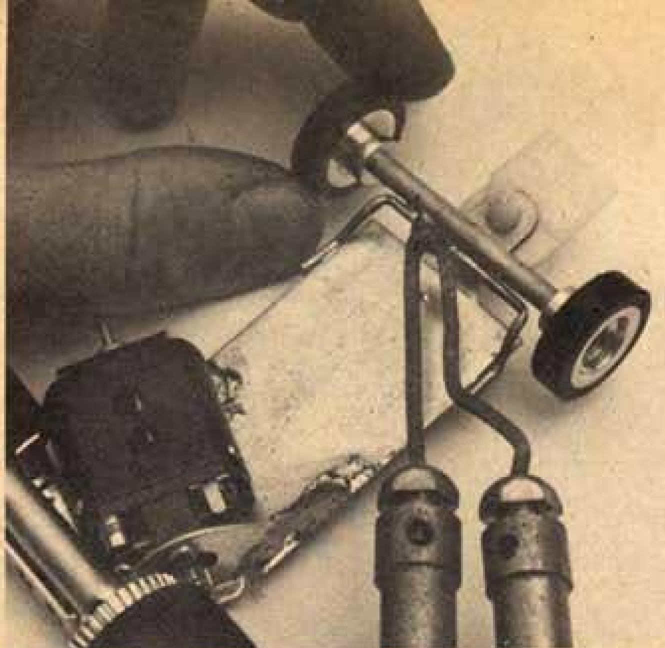
Cut a 1-1/2" piece of 5/32" K&S brass tube to serve as a front axle bearing. Assemble front wheels and axle tight for now.



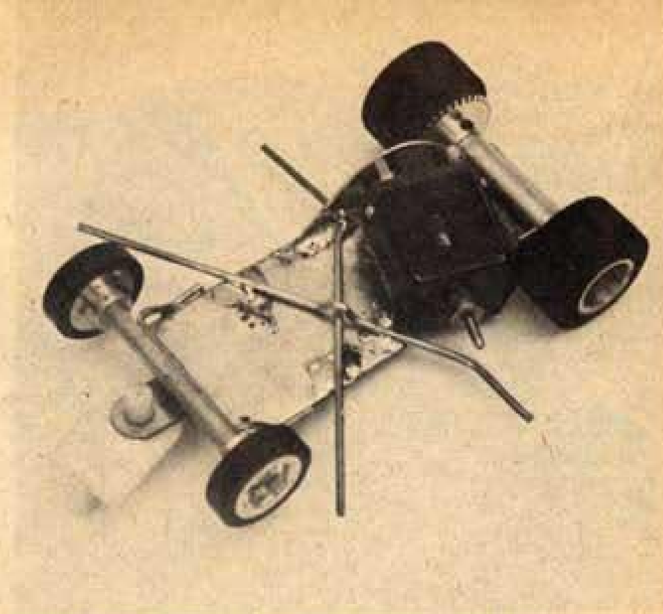
Bend a piece of 1/16" K&S brass tubing as shown to form a mounting bracket for front axle bearing. File ends smooth.



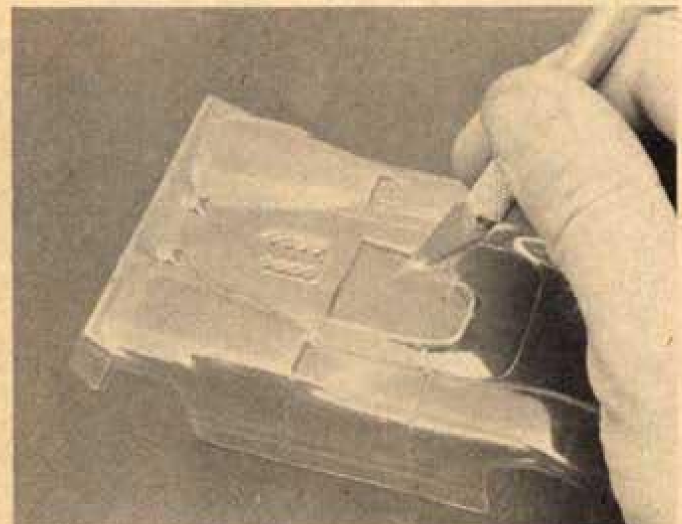
Solder the bent axle mount to the edges of the frame/drop arm. Be sure brace is at exact right angle to sides of arm.



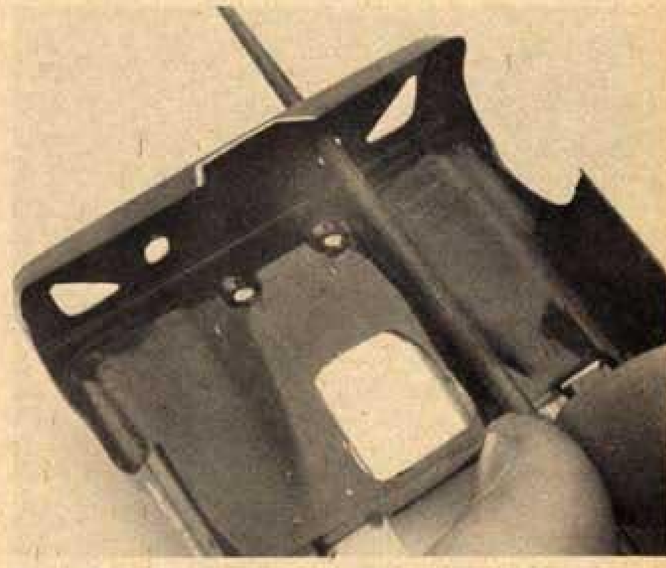
Solder the front axle/bearing assembly to the 1/16" tube bracket. When cool, loosen wheels to give 1/8" side play.



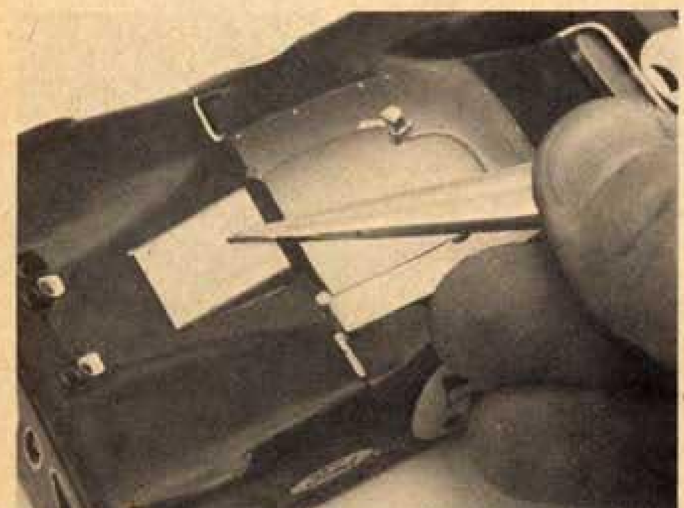
Solder two four inch pieces of 1/16" K&S brass tubing to form an "X" over chassis in location indicated. Body mounts to these.



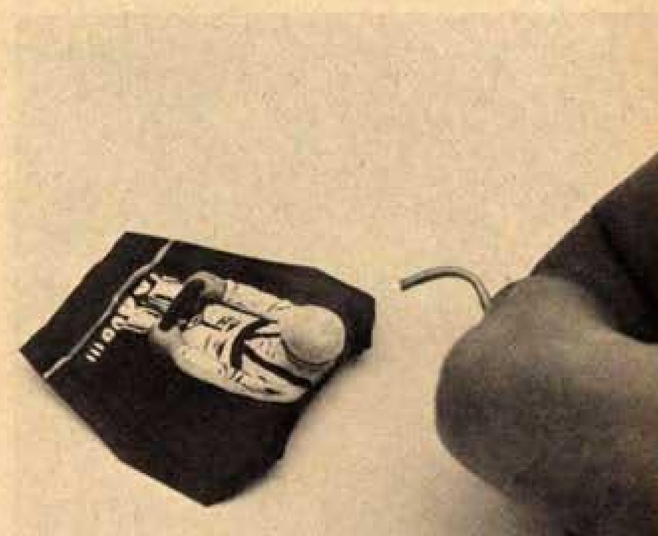
Trim the cockpit and sides of the Lancer Lola T-162 with an ultra-sharp hobby knife. Decal and paint body inside clear plastic.



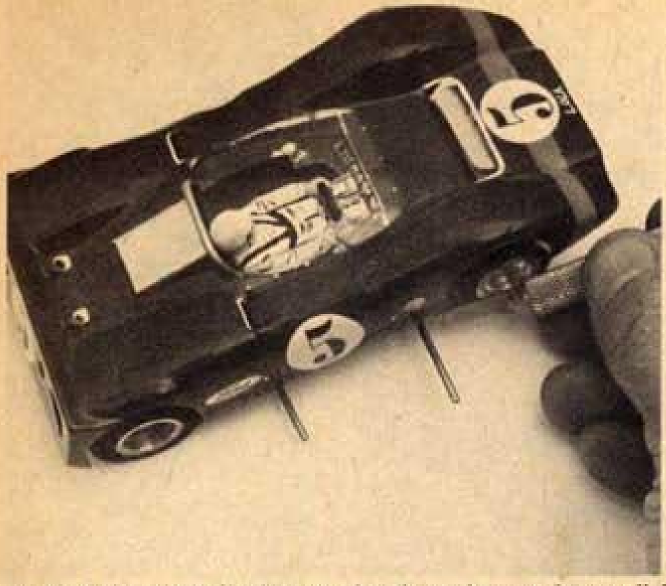
For added realism, the indented openings in the tail can be cut and filed open. Do not "open" vents in tip of nose.



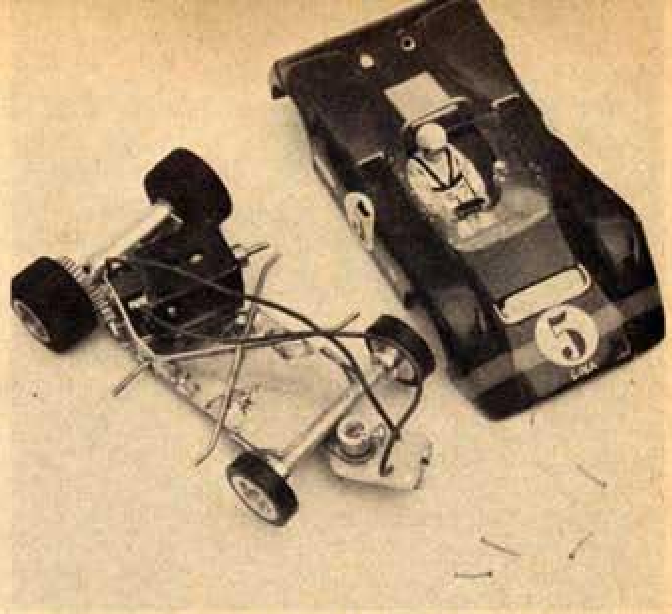
Carburetor air scoop and scoop inside nose duct are made from shim aluminum cut from soft drink cans. Epoxy in place.



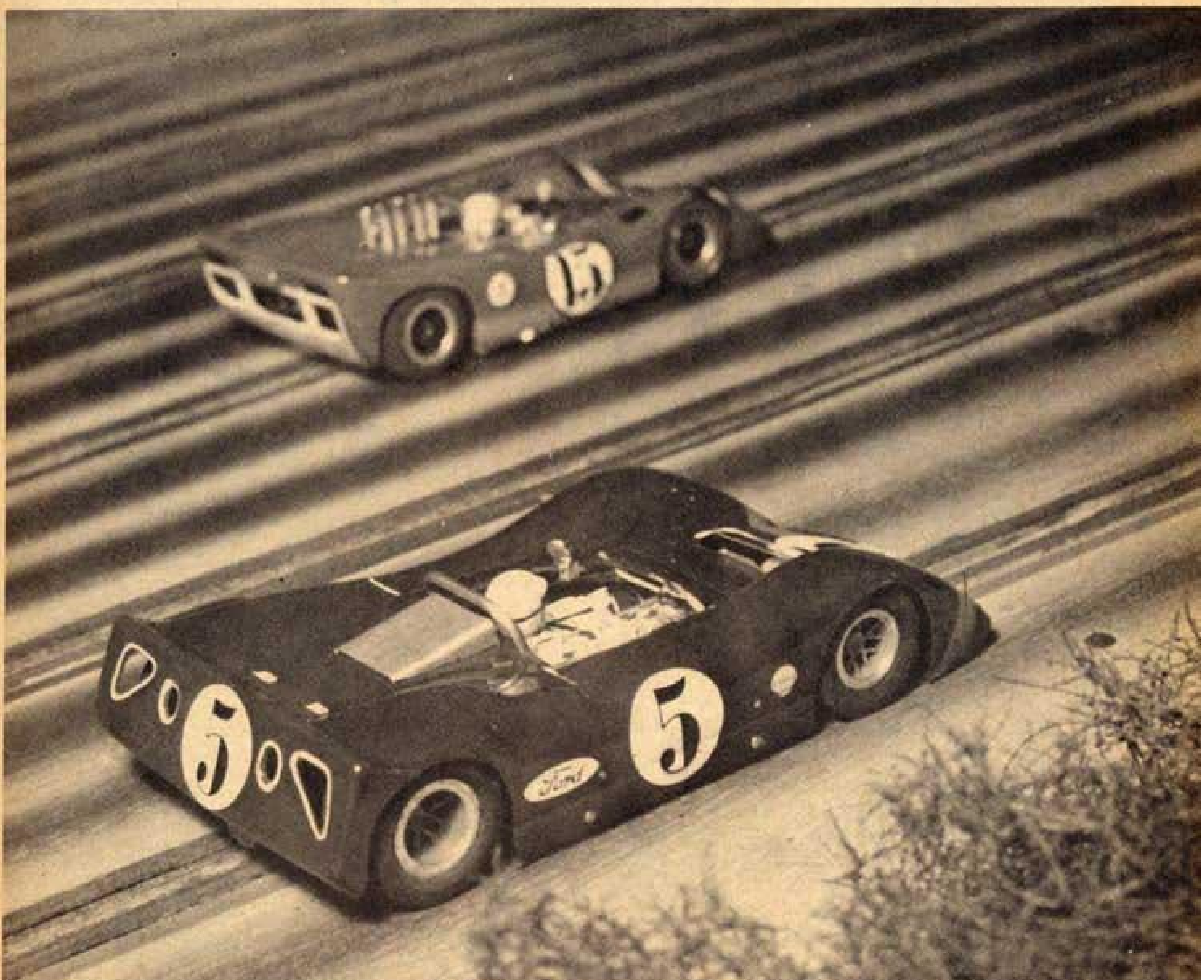
Paint driver and interior with flat (no gloss) paints. Rollbar can be bent from 1/16" tube or a paperclip and taped in.



Ends of the crossed tubes on chassis are bent to be parallel with axles. Place body over tubes and mark where to cut.



Body mounting tubes are cut to just fit inside body. Body mounts to the ends of tubes with common straight pins cut and bent.



In action at the MESAC club track in Inglewood, California. Carefully painted and detailed body is very life like.

EUROPEAN VIEWPOINT

MCS adds a talented Frenchman to its staff. Here's a bit of background on this fantastic fellow. Philippe will do a monthly European report for us, from now on.

My name is Philippe de Lespinay. I am a Frenchman, born in Paris. I worked as a stylist for Heller of France, the biggest producer of French model kits. Also, I have edited a sport review magazine, built and raced motorcycles, full-size automobiles, and slot cars. It is enough for a young man!

When I came off the DC-8 from Europe, it was my first contact with the United States. Frankly, I never thought that one day I would write in my favorite magazine, just one month after I landed in Los Angeles!

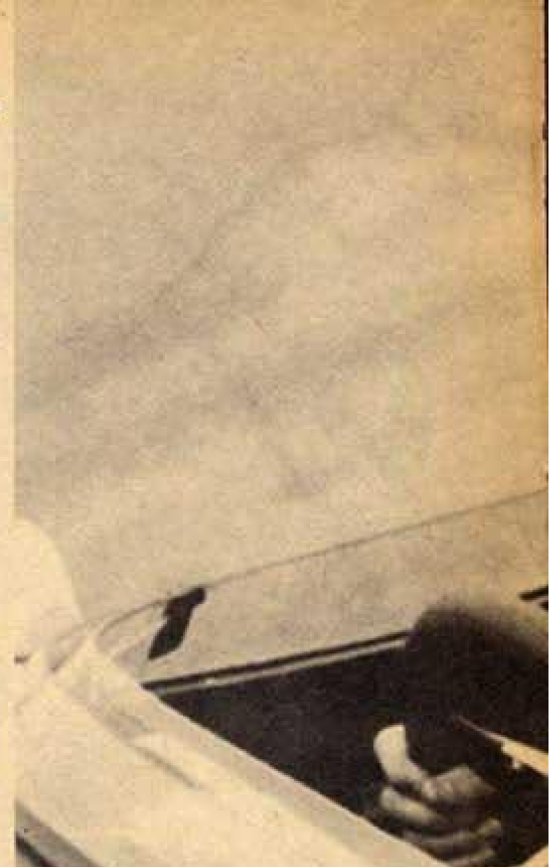
An appointment with Raymond Hoy, the sympathetic Editor of *Model Car Science* resulted in his assigning this monthly column to me.

A bit of background on me may be interesting to you: I am 25 years old, and have to my credit two French motorcycle championships in the 50cc category. Also, I was the European Champion of Slot Racing in 1967. My car was an inline with piano wire frame and one of the first Mura motors. Also, I ran some of my own motors, which I sold under the name of "Hot Slot Products." This company, which I owned with a friend, sold 36D, 26D and 16D motors and special chassis, bodies, etc. "Hot Slot" products won many main events in France (the 24 hours of Paris, 1000 Kms de Paris, six Hours of Passy, etc.).

Most of the commercial slot racing centers are closed in France, with the exception of a few big ones in Paris.

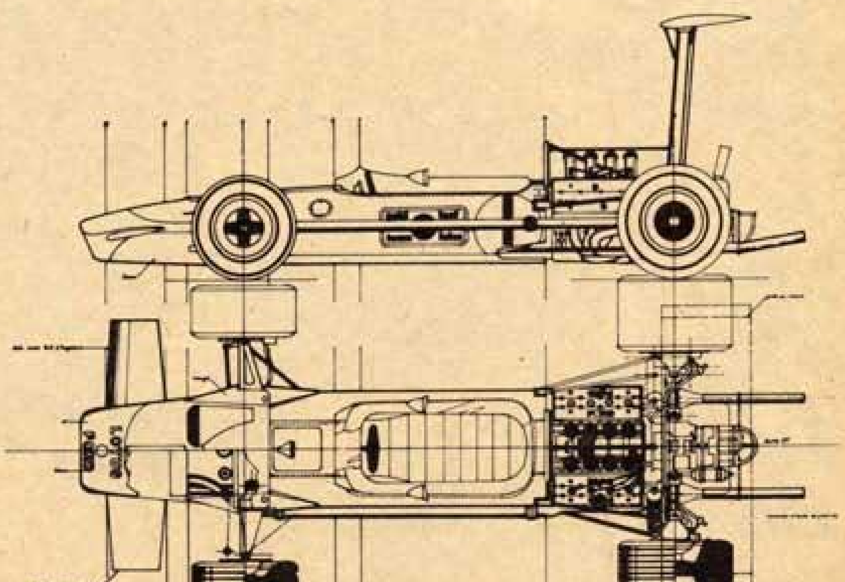
My motorcycle racing Championships came on Kreidler and Derbi motorcycles. The 50cc Kreider has a twelve-speed gearbox and develops more than 13 hp at 16,000 rpm. The gearbox is not a real 12 inline; it's an overdrive, with three ratios. To drive it, left hand and left foot combined. It is an extremely difficult motorcycle to drive. The 15 hp Derbi had a four, seven, eight, and then finally, a nine speed inline gearbox, was a monocylinder (water cooled) with disc-valve, exterior clutch, tunnel-worked fairings, special chrome-moly frame and plastic accessories – namely the





When Matra of France awarded exclusive rights to Heller to reproduce their Formula II car in kit form, I was invited to practice and to photograph it at Villacoublay's airport. Here is the car of Jo Schesser, who died in Rouen, at the wheel of the new Honda RA302 air-cooled Formula One car. Poor Jo . . . he was a good friend, but such a tragedy, occasionally, of the race car driver.

This is an element of the plan of the future Lotus 49B, from Heller, available in 1970 in 1/24 scale. It has 190 parts. I designed this just before leaving France. Here the gearbox is a ZF, but on the kit it will be a Hewland, as it should be.





My Alpine Renault developed 145 hp at 8,200 rpm, and was faster than 225 km/h. It was equipped with a five-speed gearbox. Here it is pictured in the Mont Ventoux Hill Climb.



saddle, tank, fenders and fairing. The front double brake had four cams! The top speed was faster than 100 mph. This bike, too, was extremely difficult to drive as it had a tendency to stop while in "full song" if you made the mistake of opening the gas level too much. Too much gas floods the ignition plug!

I have raced in many World Championship Grand Prix races (G.P. de Belgique, d'Espagne, de France, etc.) and I have visited, while racing, all of the European countries and some of the Socialist Republics of the East. I also drove a 24 hp, 125cc Yamaha, specially tuned, and occasionally a 250cc Bultaco, Yamaha and 350cc Aermacchi and Velocette, plus a rare ride on a 500cc Velocette for hillclimbing.

As you can see by the photos, I also rode as the passenger in the side-car on a 500cc BMW powered "Cat," which was built by Rudolf Kurth, of Lausanne (Swiss), the genius inventor of "Bassets," who worked for Fritz Scheidde and others.

In big car racing, I raced my own Alpine Gordini 1600 two OVC Renault, in hillclimbs, and a "Formula France" car of my own design and construction.

I have raced, also, model airplanes, very popular in France, in particular my plane with special duraluminum wings, "Micron" powered. But I gave this hobby up in 1962 because I simply was overcome with work! Believe it or not, the tuning required is much more laborious than for slot cars!

You will find some of my model designs in AMT boxes! The Matra and Brabham were designed by me, while working at Heller (AMT imports the Heller kits under their own name).

Enough. In this space, I will report on news from Europe on 1/32 and 1/24 slot racing, and on the latest plastic releases.

I would be most happy to hear from you, but please, write in clear English, because I have a very difficult time understanding your language (he's learning darn quick – Editor). Send your letters to Philippe de Lespinay, C/O Model Car Science, P.O. Box 1821, Thousand Oaks, Calif. 91360.

NEXT MONTH: MCS SPOTLIGHTS "BRICK" PRICE

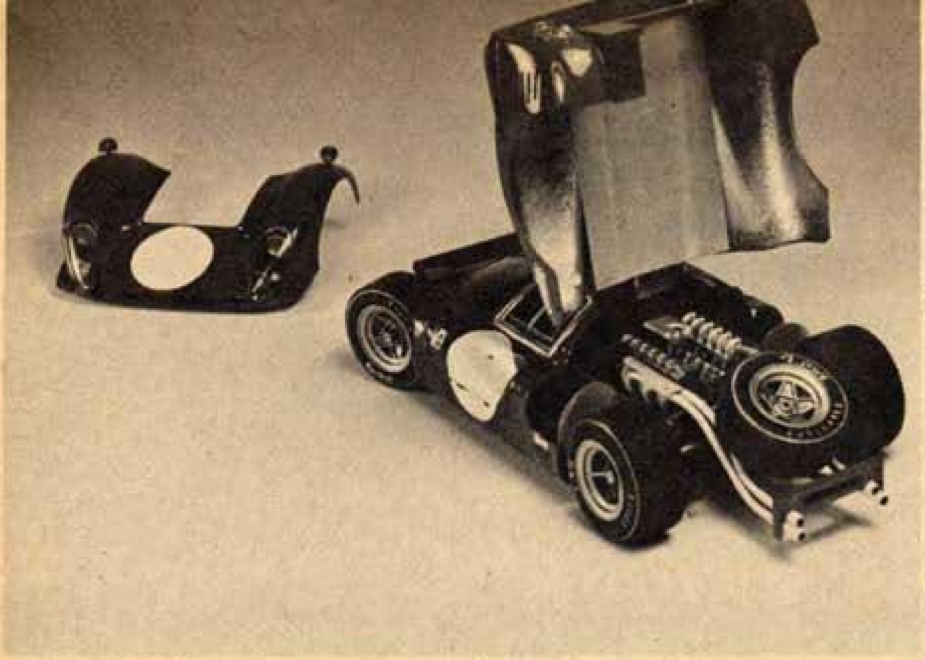


The Formula France car that I designed, built and raced was a multitubular affair with a plastic skin. Since in France you have to pay to race on tracks, I raced this car mostly at hillclimbs.





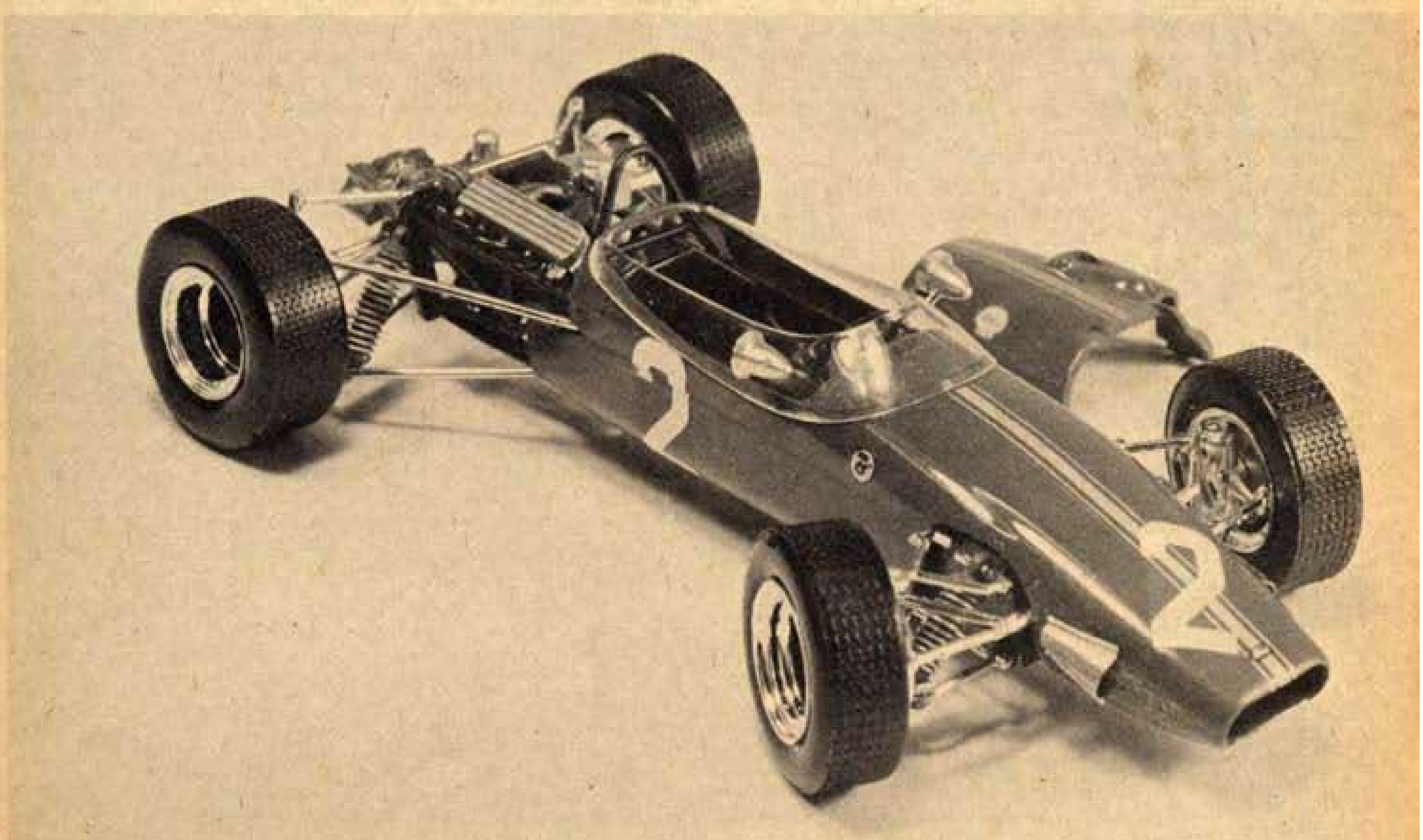
At Spa Francorchamps, during the Belgian G.P., on the factory eight-speed Derbi. The ratio was so long that I made 3/4 of the track with the intermediate gearbox ratios. The top speed was just at 161 km/h in the Masta downhill. My tachometer registered 14,000 rpm. The best lap was at 133 km/h which is not bad for a "coffee cup" barrel!





The Ferrari P4 Ferrari, by Heller. Unfortunately the designers included many mistakes that were not on my scale plans, as so often happens. The French workmen who make the molds, etc., do not take kindly to criticism from the original designer, so they usually choose to ignore his remarks!

Quite an occupation! I made sure, always, not to get out of the fairing's protection, but for left turns it was necessary for me to hang out of the "basket" in order to acquire the best possible handling. I do not recommend this for sensible men, as the speed is 120 mph!



This Brabham Formula III, from Heller (distributed by AMT in the U.S.A.) is the favorite of my "children." It has a tubular frame that is very realistic. Note the metal suspension springs.

THE N.C.C. STORY

By Gene Husting

Taking the confusion out of the commercial track scene

What is the NCC? How is it connected with slot car racing? Who is the NCC? How can it help me? What can I do for it? These are questions generally asked by most slot racers the first time they see a car labeled "NCC approved" or a set of NCC National Rules.

Well, not too long ago, as time goes, the leading teams in Southern California (Checkpoint, Dynamic, Riggen, Zimmerman, Mura, Weldun, Russkit and Champion-West) all joined forces to create the U.S.R.A. (United Slot Racers Association). With the wealth of knowledgeable talent on hand, a set of rules were drawn up that were designed *by* and *for* commercial track slot racers.

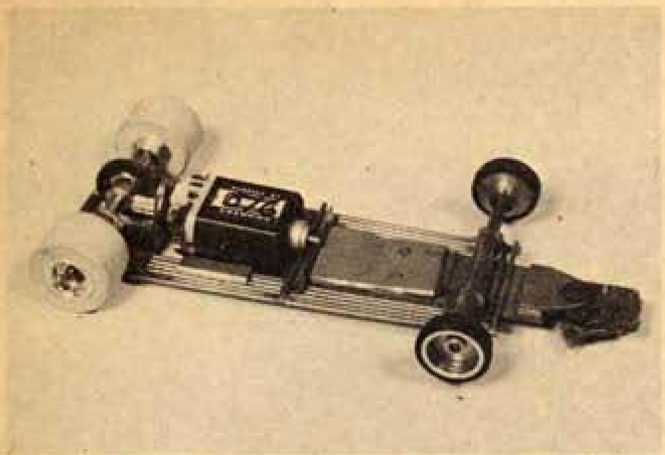
Model Car Science believed in the U.S.R.A. and co-sponsored their series of races and together with *Model Racing Journal*, the word spread across the country of a new organization with a great set of rules. The results were tremendous. A U.S.R.A. chapter was formed in 47 different areas of the country, with all these racers using the U.S.R.A. rules. This was the closest we had come at that time to achieving a universally accepted set of rules. It was very encouraging.

At the same time, Champion was staging a series of highly successful Arco races across the country using their own Arco rules. Their rules and the U.S.R.A. rules were very similar. Realizing this, Bob Rule of Champion called me and asked if the U.S.R.A. would be interested in sitting down with Champion and writing a set of rules for the coming season together. I thought this would be a great idea as everyone here wanted one set of rules that they would be able to build a car to and run in any race in the country. I told Lynn Fletcher, then the President of U.S.R.A., of Champion's proposal and he brought it up at the next meeting and the membership agreed to the proposal. After a little more thought on the subject Bob Rule thought in order to make the rules more truly universally acceptably it would be a good idea to invite all the slot car manufacturers and slot car publications to the meeting. We agreed, but were very apprehensive. After all, this group was in direct competition with one another. But it was sure worth a try.

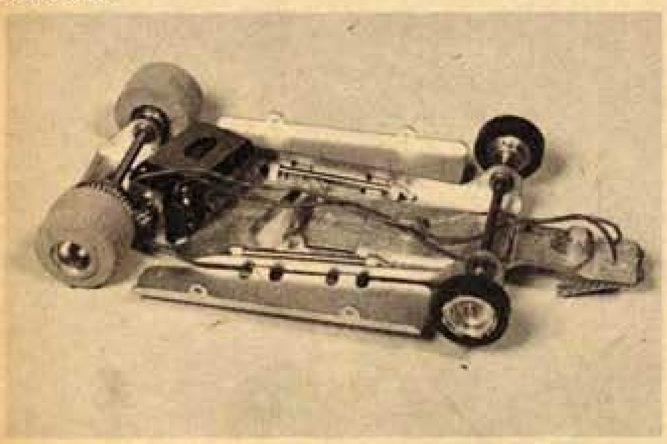
The meeting was set for the day after the Arco race in Los Angeles on November 3, 1968. Would the manufacturers respond for a plea to unite and create a universal set of rules? Did they! Everyone in slot car manufacturing was there. Bob MacLeod of Car Model magazine was appointed chairman of the meeting. Steve Urette (Publisher) and Ray Hoy (Editor), Model Car Science; Bob Rule and Jack Lane, Champion; Lynn Fletcher and Gene Husting, U.S.R.A.; Mike Morrissey, Model Racing Journal; Ron Mura, Mura Products; Bob Lenz, Lenz Products; Chris Vitucci, Mini Wheels; Jim Kirkbride, Riggen; Jack Garcia, Dynamic; Bruce Paschal; Frank Vales, Champion – West. Bob Emmot, Emott Racing Ent.; Mike Tango, U.S.R.A. – East; Jim Gallagher, Weldun. All of the above greatly contributed their efforts to make this meeting a harmonious gathering, showing that it could be done.

It was not a shortmeeting. The rules were not just read over and approved. The meeting started about noon and went on into the night. Each item of every rule was discussed and everyone had a chance of giving their opinion on the rule before it was voted on. There were no unsurmountable problems or hassles. It was just a matter of time, and I'd really like to thank everyone present for their help in making this meeting a success. Out of it came the N.C.C. rules. These rules have been published in all the model car magazines and are used everywhere in the country. It means you can build a car to these rules and know it's legal to run in any major race anywhere in the country. And just as important, it also means the manufacturers can now build their parts to conform to these rules so they'll be accepted everywhere.

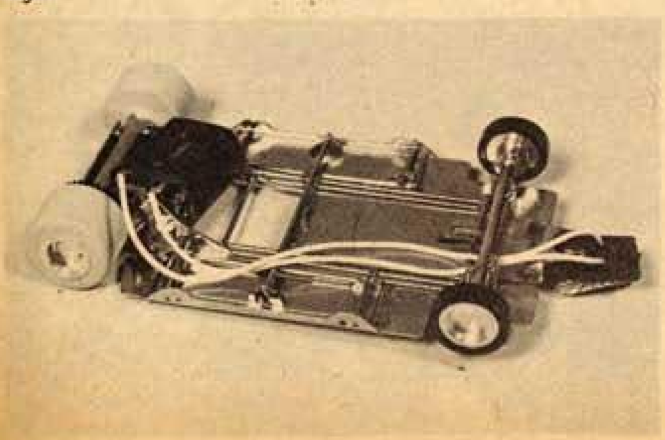
During this time two other problems were becoming apparent. The cost of slot car racing was going out of sight and all of the races were being dominated by a few pros. The U.S.R.A. found the solution to the latter problem. By making two new classes of drivers, amateurs and semi-pros, together with pros, the U.S.R.A. started to break all entry records for their races. This driver classification soon spread across the country with the same gratifying results. At the same time Champion started to work on the first problem – cost. It had been suggested repeatedly from many sources that, the motor should be limited to a certain low cost (motors at this time were selling as high as $39.95 with a very short running life) and that the whole car should only cost about $20.00. Well, this seemed to be too much to hope for, but Champion, headed by Bob Rule, sponsored a few "Group 20" races in April, 1969 to see how they would be accepted by the racers. The initial races were run with only small local promotion but the results were very promising. The word started to spread and Ken MacDowell at Parma Raceways wanted to hold a Group 20 race and really promote it. So Bob Rule got Mura, Bob Haines (REH), *Car Model* magazine and Champion to co-sponsor the race. It turned out to be a huge success and orders started pouring in for Group 20 kits from all around the country. There were only two restrictions on the cars. No. 1 – the chassis had to be Champion's Anglewinder frame and No. 2 – the armature had to be Mura's No. 27 wind and labeled "Group 20" on the armature. The racers had a good handling chassis with a mild, yet fast enough motor that they could run for hours with good reliability and handling.



FORMULA III – Maximum price – armature $5.95, chassis $5.00. NOTE: armature must be the same as the N.C.C. Group 20 armature. Chassis may be scratchbuilt or manufactured by any NCC manufacturer. Chassis must be inline – no sidewinders. At one time the most popular class in slot racing, but now is seldom run. Definitely not the class for a beginner to start with. Car will not handle half as well as a sidewinder sports car. Mainly being run now only in club races.



GROUP 12 – Maximum price – armature $2.98, motor $5.98, car, ready-to-run, $12.98. NOTE: All N.C.C. member brand names allowed. This is the most economical class to start with. If you're just starting to learn to drive this is probably the best class to use if you're on a tight budget. If you plan on running in the weekly races make sure there is a Group 12 race before you buy the car. There will be many different brands of NCC approved Group 12 cars available, so ask the track owner or some fellow racers which brand seems to run best on your local track. The best car for your track might not look identical to this picture but as long as it's labeled NCC approved Group 12, it's legal.



The next step was to get the group-type racing nationally accepted. After finding that the manufacturers could work together (at the NCC rules meeting) Champion and Mura suggested that they meet again to see what they could come up with to further the low cost racing suggested by everyone. The same basic group met again in Texas in July, 1969 and officially formed the N.C.C. When Champion suggested the proven Group 20 with Champion's chassis and Mura's armature, all of the other manufacturers balked. This was not free enterprise! They all wanted to have their own chassis and their own hardware. But it was generally agreed by everyone that one of the reasons slot car racing had become so expensive was that a chassis that worked today was obsolete tomorrow as well as other parts. Racers had to be continually buying the latest parts and the dealers and wholesalers were being stuck with "obsolete" parts. So the manufacturers agreed the ideal Group 20 car should have one basic chassis that could not become obsolete and one standard armature. Champion and Mura were the only manufacturers who could immediately begin supplying chassis and armatures in a sufficient quantity, so their parts were approved by the NCC for a period from August 1969 to February 1970, the date of the next NCC meeting. All manufacturers could purchase these chassis and armatures at a fair cost and resell them, either individually or in kit form or with the armature installed in a motor or as a complete car. Thus Riggen, Dynamic, Associated, Champion, Mura, Cobra, Rehco, Phaze III, etc., etc., could install their own individual brand tires, wheels, motor cans, pickups and bodies and label them as their brand and NCC Group 20 approved. In order to keep the free enterprise system alive the NCC also approved the NCC Group 12 car. There were only two restrictions in this class. The total price of the car would be limited to $12.95 and the armature could not be balanced or epoxied. The Formula 3 class was also approved.

When the outcome of this meeting became known, Group 20 racing started to spread like wildfire. "How to do it" articles were written on how to assemble and tune Group 20 cars. Raceways started their own Group 20 races and watched their race entry lists grow. Dealers weren't afraid to stock Group 20 kits and cars because they didn't have to worry about their stock becoming obsolete. Racers were buying the Group 20 for the same reason. Actually the Group 20 racing went over better than expected. Champion's stockpile of 8,000 chassis were sold out ahead of time and there was a short while when they were unobtainable until the new stock came in.

In February 1970 the NCC met again in Chicago. It was time to either change the Group 20 rules or renew them, but everyone who had run Group 20's, and the shop owners wanted this class left "as is." So the NCC approved this class as is for another year. In addition they created the new Group 15, and Group 22. The NCC has also made available a trophy package for shopowners consisting of three trophies, 50 participation stickers, two window banners 1x3 feet, three wall posters 11x17, one set of NCC rules, four registration forms, and four work sheets, all for

GROUP 15 – Maximum price – armature $3.98, motor $7.98, car, ready-to-run, $15.98. NOTE: All N.C.C. member brand names allowed. The Group 15 cars are the next step up from Group 12 cars. They will be a little faster and should handle a little better. As in the Group 12, check to see if they hold Group 15 races if you want to race. There will also be a variety of chassis available so again check with the track owner or fellow racers to see which one works best on your home track. Also it does not have to look identical to this picture as long as it's labeled NCC approved Group 15.

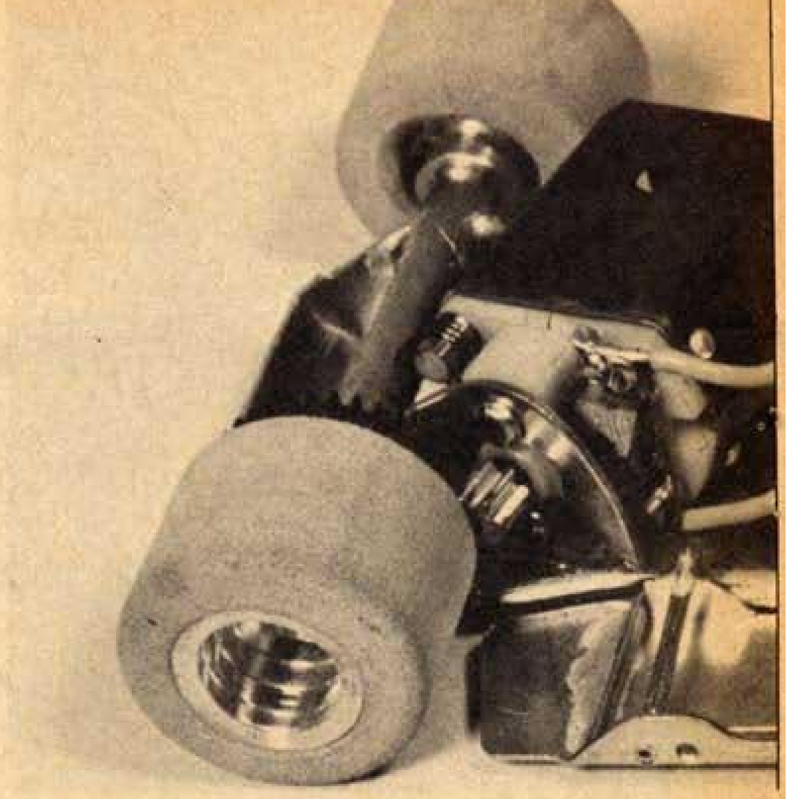
the ridiculously low price of $10.00 if you're an NCC member or $15.00 if you're not. Check or money order should be sent to N.C.C. Trophy Package, 615 Ridge Road, North Arlington, New Jersey. No C.O.D.'s. Also enclose $1.00 for postage. For those racers who would like to join the NCC the membership fee is $5.00. Send check or money order to NCC, Box 31228, Indianapolis, Indiana 46231.

In all of the groups (except open class) there is a limit on the cost of the armature, motor and complete car. This is a definite advantage to all you racers. Normally when a manufacturer comes out with something better the price goes up. But in the group racing the prices are set. So the manufacturers will still be competing against one another to bring out a better car but the price of a car will not be going up. The present rules and classes are in effect until the end of 1970. This does not mean that you cannot do some of your own tuning on the car. After all, this is half of what racing is all about. You're going to wear the tires out on your car. You'll have to replace them, but you need not use the same type that came on the car originally. If another brand works better on your track it's perfectly legal to change. You can also change the type of pickup, or gears, or body and add weight as long as they conform to the NCC rules for your class. The NCC, as yet, has not come out with any rules concerning controllers, but if you're a newcomer you'll probably want a little help here too. If you're on a tight budget a MRC, Cox or Champion controller will get the job done nicely. One thing to remember is the controller is very important, so take your time in choosing the right one. If you can afford it, Parma makes a great controller starting at $12.95 and from there the prices go on up to the super pro model by Gorski that sells for $49.95.

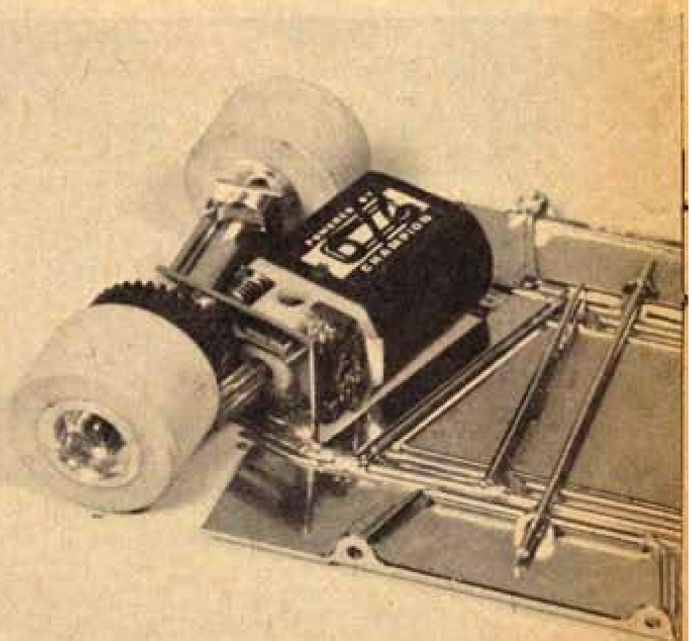
SHOPOWNERS NOTE: You might want to post the pages with the pictures of the various groups on a wall near your counter. If you're busy with more than one customer at a time and you receive an inquiry like "what's the difference between Group 12 and Group 22?" you could save yourself some time and do your customer a favor by having him refer to the pictures with explanations. It would be a good idea also to post the NCC rules alongside.

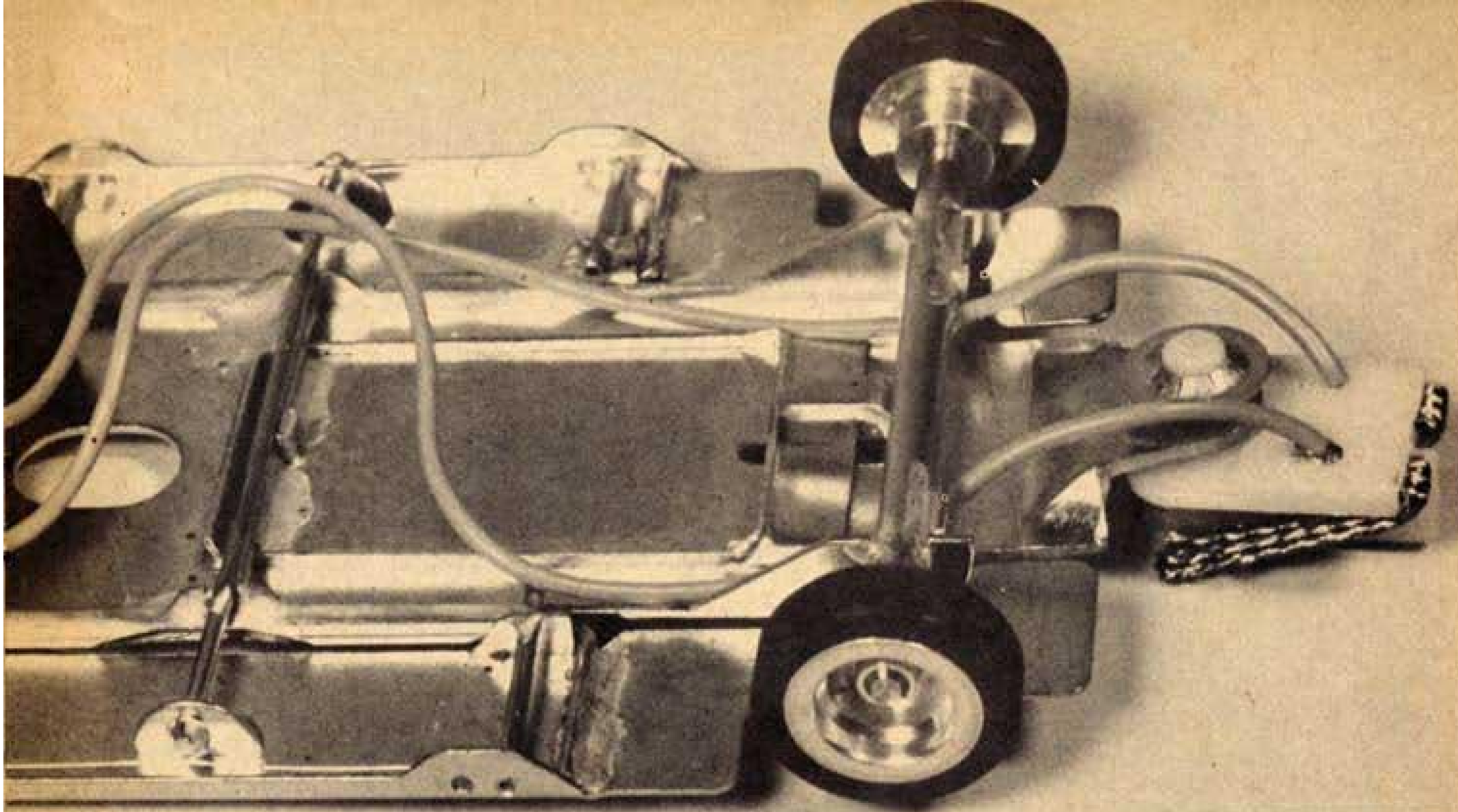
Now here's some information for you: There's a new newspaper on the market (sold by subscription only) devoted strictly to slot cars (H.O., 1/32 and 1/24). It's titled "Miniature Auto Racing" and it's jammed with excellent features on chassis construction, track building, tuning and handling tips, plus technical articles on motors, gears, etc. You'll find information on NAMRA and HOCCI races, as well as N.C.C. races, too. The subscription rates are so low you can't miss! Try this on for size: three month subscription, $1.00 (!); six months, $2.00; and twelve months, $4.00. Subscribe *now*, before you forget it.

You "big car – 1:1 scale" buffs are no doubt familiar with "Autoweek," the weekly newspaper for big car racers. Well, "Miniature Auto Racing" is very similar in physical size, and general treatment of the sport. It's written by the top names in slot racing. What more can I say? Subscribe to it – now! Send your $1.00 (for three months) or $2.00 (for six months) or $4.00 (for a full year) to Pacific Publishing Group, P.O. Box 1821, Thousand Oaks, California 91360. A newspaper gets the news to you while it's really hot. In fact, you'll learn what the pros are running and how they build those great winning cars, such as the N.C.C. cars you see here, just a few days after they build them! Subscribe now, it'll do the sport – and you – a lot of good!



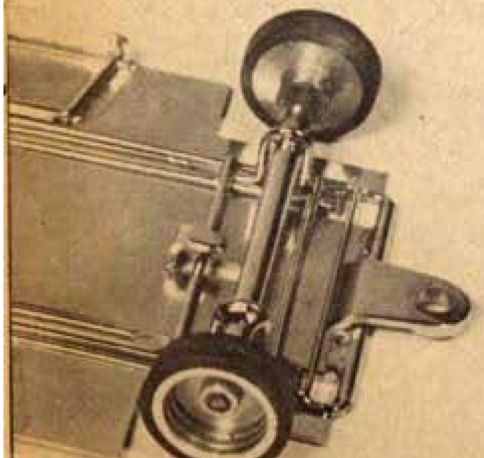
GROUP 20 – Maximum price – armature $5.95, motor $9.95, car, kit, complete $19.95, car, ready-to-run, $24.95. NOTE: Only the original N.C.C. approved chassis and 27 gauge wire armature may be used. The most popular of the groups is Group 20. Your local raceway definitely should schedule at least one Group 20 race during the week. All Group 20 chassis are identical to the picture so there is no fear of it becoming obsolete tomorrow. These cars can be assembled by any NCC manufacturer so they'll come with different bodies, motors, tires, gears, etc., but all will have the same chassis pictured above. If you can afford it this is the best car to start with as it will be faster than either the Group 12 or 15 but will also be easier to drive.

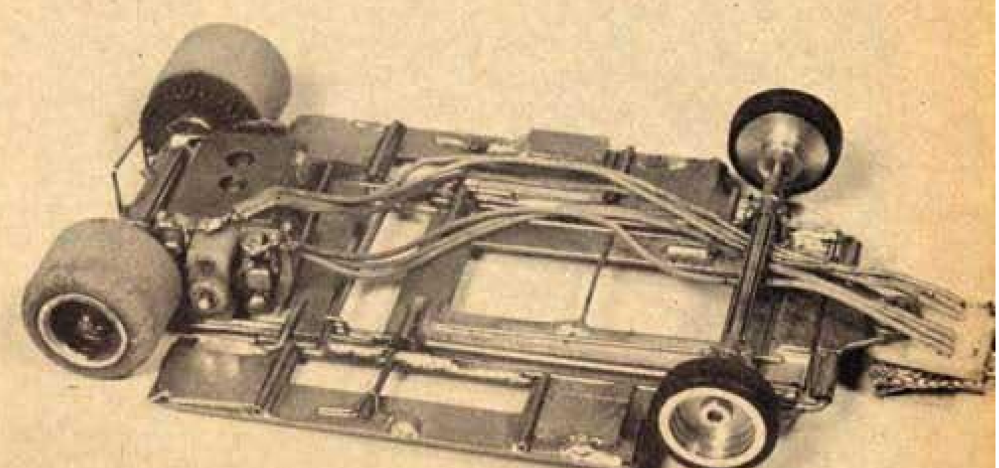




GROUP 22 – Maximum price – armature $5.95, motor $9.95, chassis $5.95, car, kit, complete $19.95, car, ready-to-run, $24.95. NOTE: All N.C.C. member brand names allowed. This is the fastest and best handling class in the group type racing. Be certain to check with your raceway to be sure they hold Group 22 type races. This class will have the latest type chassis patterned after the pro type chassis so they will be continually changing. Each manufacturer will have their own type chassis for this class so each brand will handle a little differently. Check with your local track owner or fellow racers for help in deciding which handles best on your track.

OPEN CLASS – This is the wide open pro type class car. There is no cost limit on any part of this car. The only restrictions are that it must comply with the current NCC rules, as must any group-type car. Chassis can be purchased for this class from people like Gilbert, Emott, Steube or Morrissey who are leaders in this field. Prices will range up to $35.00, but most chassis in this class are scratchbuilt. Motors can be custom built by people such as Steube, Zimmerman, Kean, Reeteez, etc., etc. and could cost as much as $50.00. Most racers generally buy a custom armature and assemble their own motors. Complete cars generally run close to $100.00. This class not recommended for the beginner unless you're bucks up or have a friend who can help you.



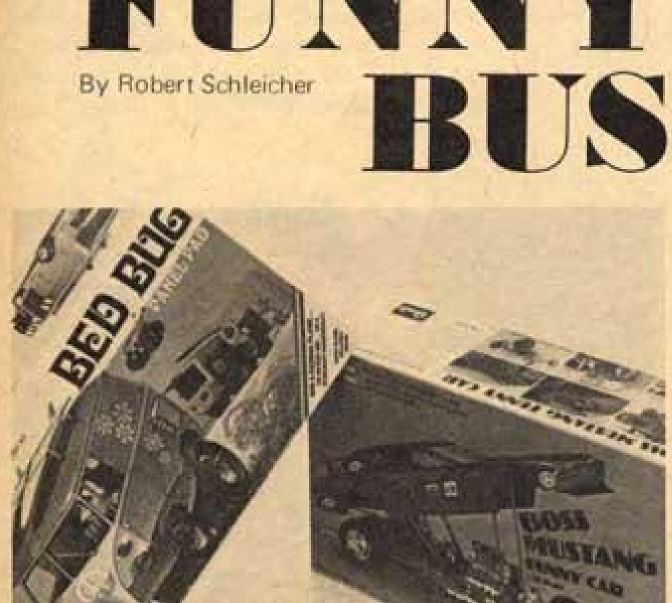




FUNNY BUS

By Robert Schleicher

The Vee Wee peoples' answer (with Revell's help) to those "funny car" trucks

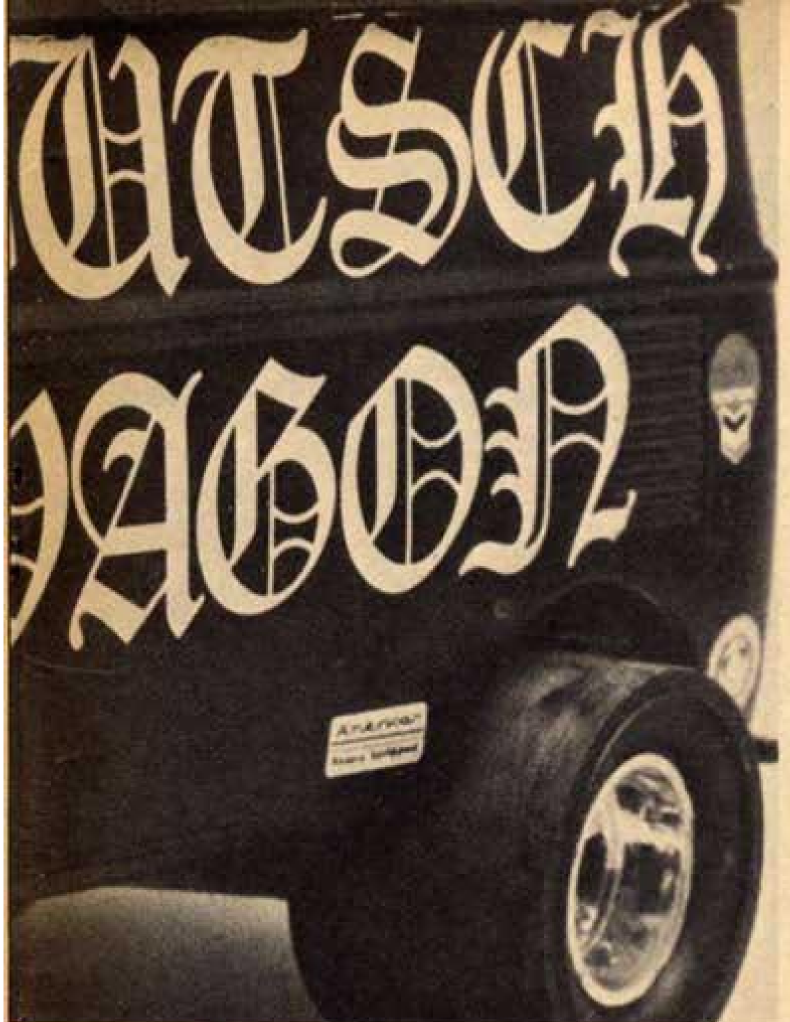


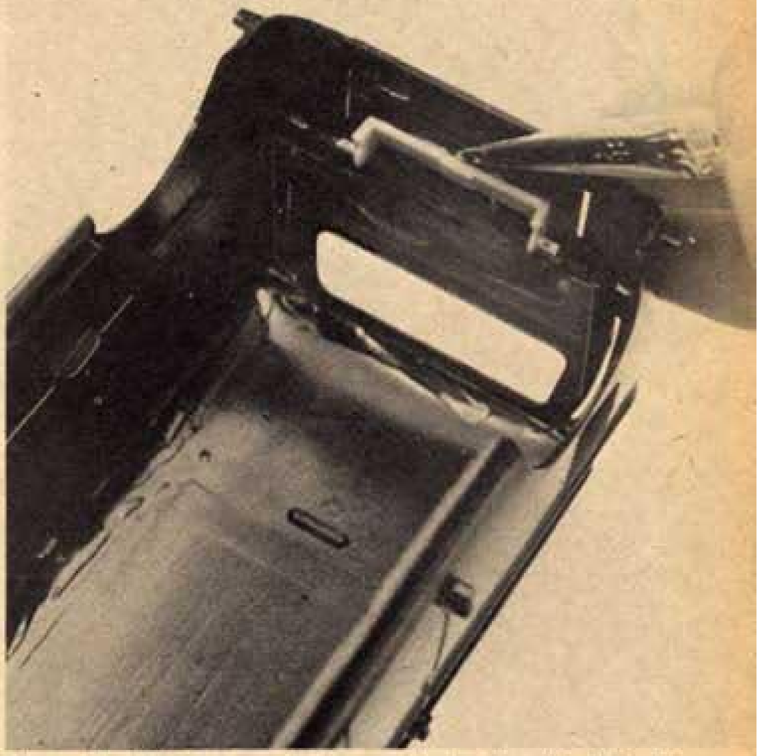
Our VW van dragster requires one each of Revell's "Bed Bug" and "Boss Mustang" kits. Lettering is dry transfer type.

There are all types of Volkswagens appearing at drag strips across the country. Some, like EMPI's, are strictly VW-like under the skin. Others, like the Durachrome-sponsored car, are powered by blown U.S. V-8s hung in tubular chassis. We know of no such racing version of the nearly-as-popular VW panel trucks or wagons. Why not? There's an assortment of both Dodge and Ford "cabover" vans and pickups that travel both forward and backwards down the drag strip. It's about time VeeDub fans had their day at the strip.

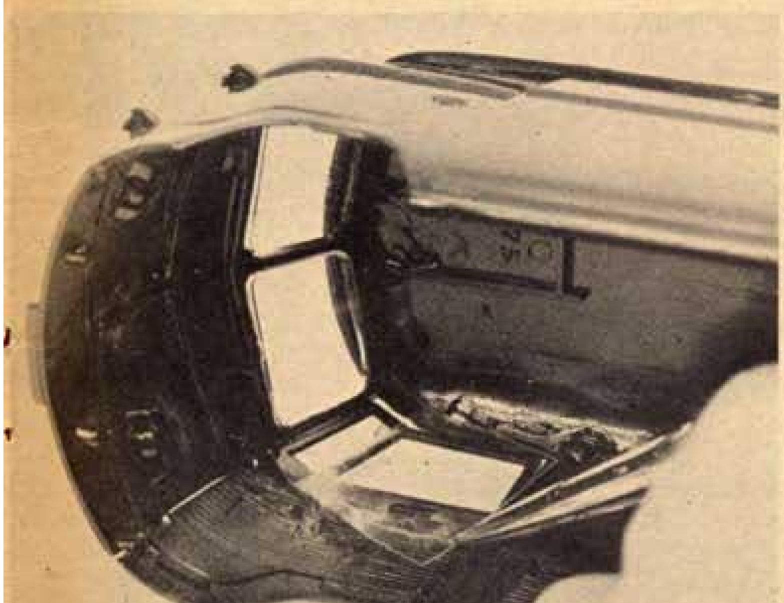
It would be a bit more difficult to make a real version of our "Funny Bus" than it is to make one from a pair of Revell kits, but the general procedure would be the same. The VW panel truck body is stripped of all interior detail, the doors welded (glued) shut, and the thing draped over one of the more-or-less standard funny car tubular chassis. The Revell "Panel Pad/Bed Bug" provided our 1/25 scale body and the Revell "Boss Mustang" the engine and chassis. Lettering is "Old English-" style (that's right English) dry-transfer, sold by larger drafting supply stores.

The exterior shell of the Revell "Panel Pad/Bed Bug" is assembled just as outlined in the kit instructions – without any of the interior panels or hinges. Glue the doors shut. The body/chassis mount from the Revell "Boss Mustang" mounts the body at the rear and provides a hinge. The body support posts from the "Boss Mustang" are glued to the chassis to support the front half of the VW panel delivery body. The only other major change in the two kits is a shortening of the "Boss Mustang" frame to fit the wheel wells of the VW van. The rear wheel cutouts are pre-radiused in the kit to fit tires as large as those in the "Boss Mustang."





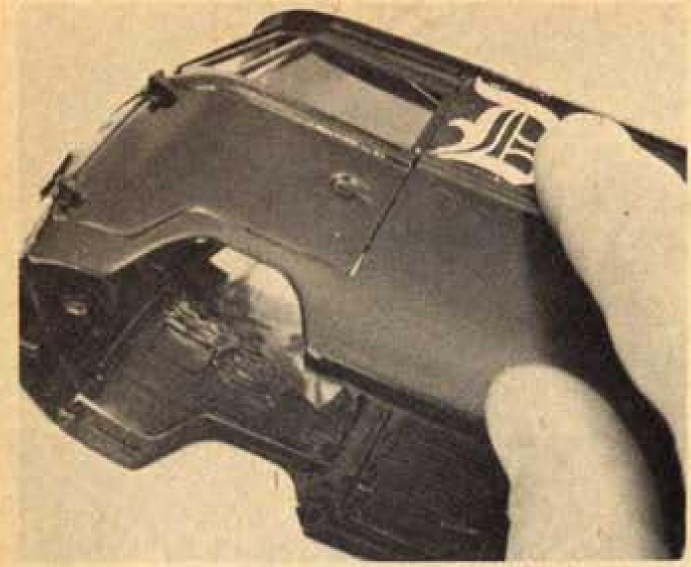
Glue all of the outer body panels in the "Bed Bug" together. The rear body mount from the "Boss Mustang" is used.



Clear plastic windows from the "Bed Bug" are glued in place inside the body. Use contact cement to hold side windows.



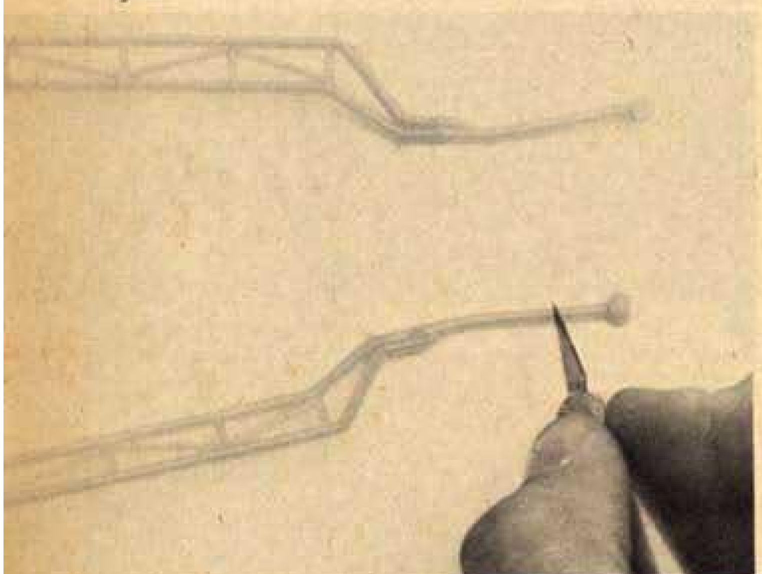
Lettering is sold by drafting supply stores for about a dollar a sheet. To use it, position first letter carefully.
Letters are applied one at a time, with dry transfer lettering. Rub over all of colored portion of letter with pencil.



Lettering sheet is carefully peeled away after letter is rubbed over with pencil. Letter will stick to body. Press tight.



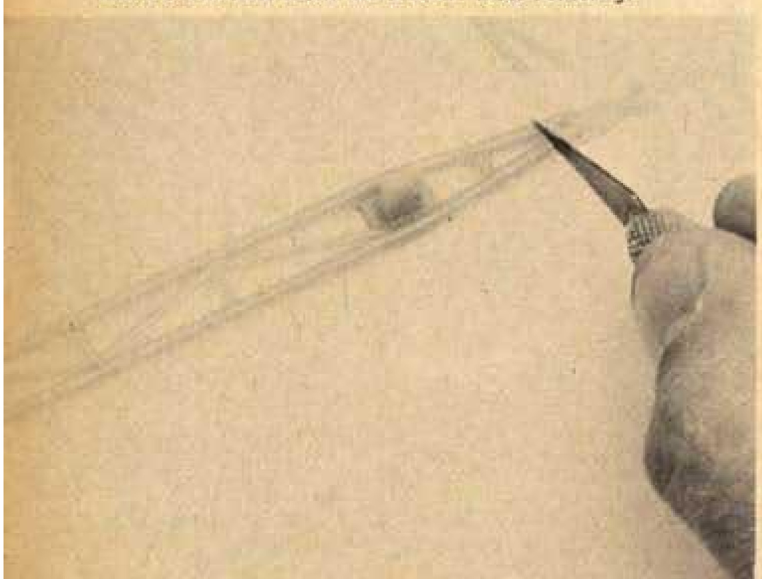
"Letraset" brand dry-transfer lettering sheets now have aligning marks that make it easier to space each letter.



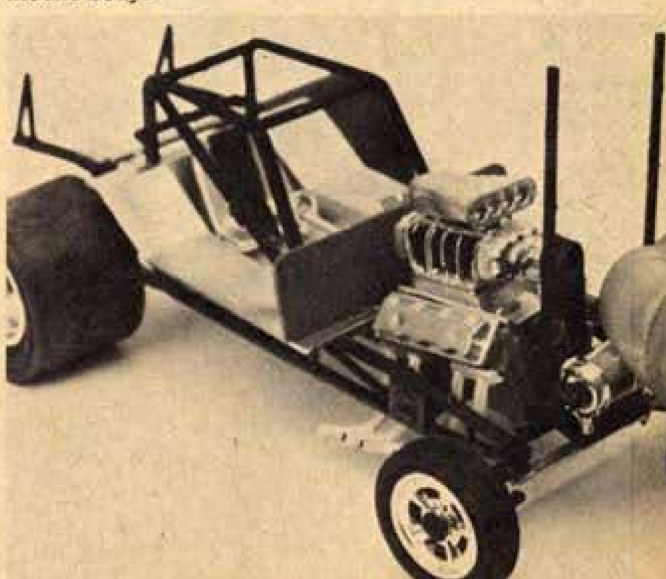
A half-inch must be sliced away from each of the "tubular" frame's side rails from the Revell "Boss Mustang."



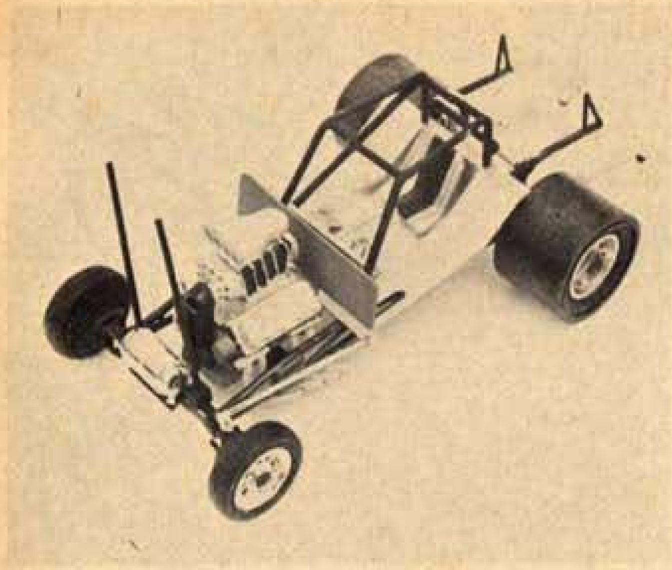
Trim away the triangular body supports from the "Boss Mustang" frame. Supports are glued to rear of frame to mount body.



Front half-inch of each "Boss Mustang" frame side is removed. File a half-round notch in frame front to fit axle.



"Boss Mustang" body prop rods are glued to front of chassis as the permanent body supports for VW "Bed Bug."



The balance of the chassis and engine are exactly as supplied in the "Boss Mustang" kit. We like those rear slicks.



Triangle pieces at rear of frame fit over pegs of "Boss Mustang" rear mount glued inside VW to hinge-mounted body.



A piece of piano wire or scrap plastic can be used to support front of body in its chassis-show-off position.

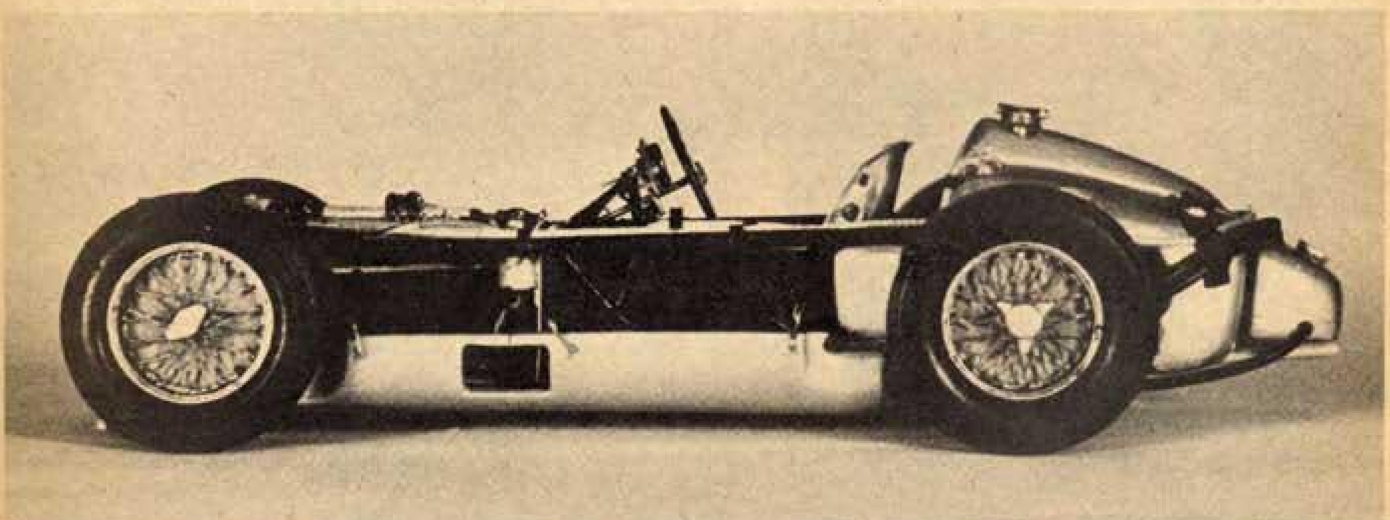
MODEL OF THE MONTH

HOW TO ENTER

HERE'S WHAT YOU CAN WIN!

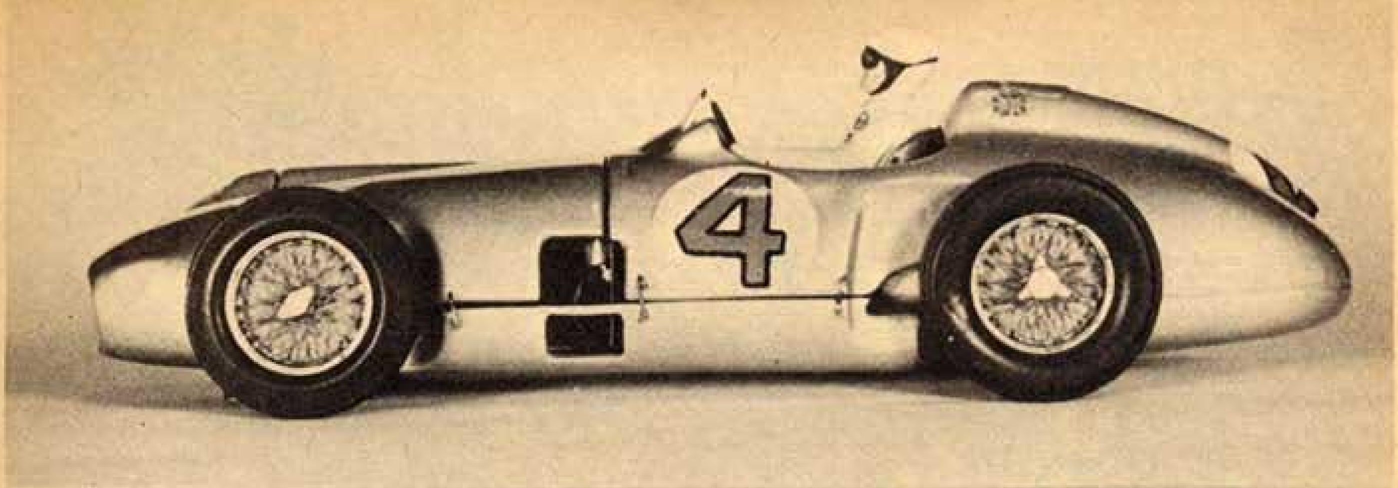
The first place winner of our Model of the Month contest receives this fantastic Dremel No. 261 Moto-Tool kit – a $32.95 value! The kit contains the following: Powerful No. 260 Moto-Tool, 34 accessories including high-speed steel cutters, grinding wheels, wire and bristle brushes, rubber polishing tip, sanding discs, drum sander and sanding bands, mandrels, dressing stone, finger grip extension, collet wrench and 1/8", 3/32", 1/16" and 1/32" collets, all in a molded polyethylene storage case! A magnificent, life-time tool set that is perfect for modelers.

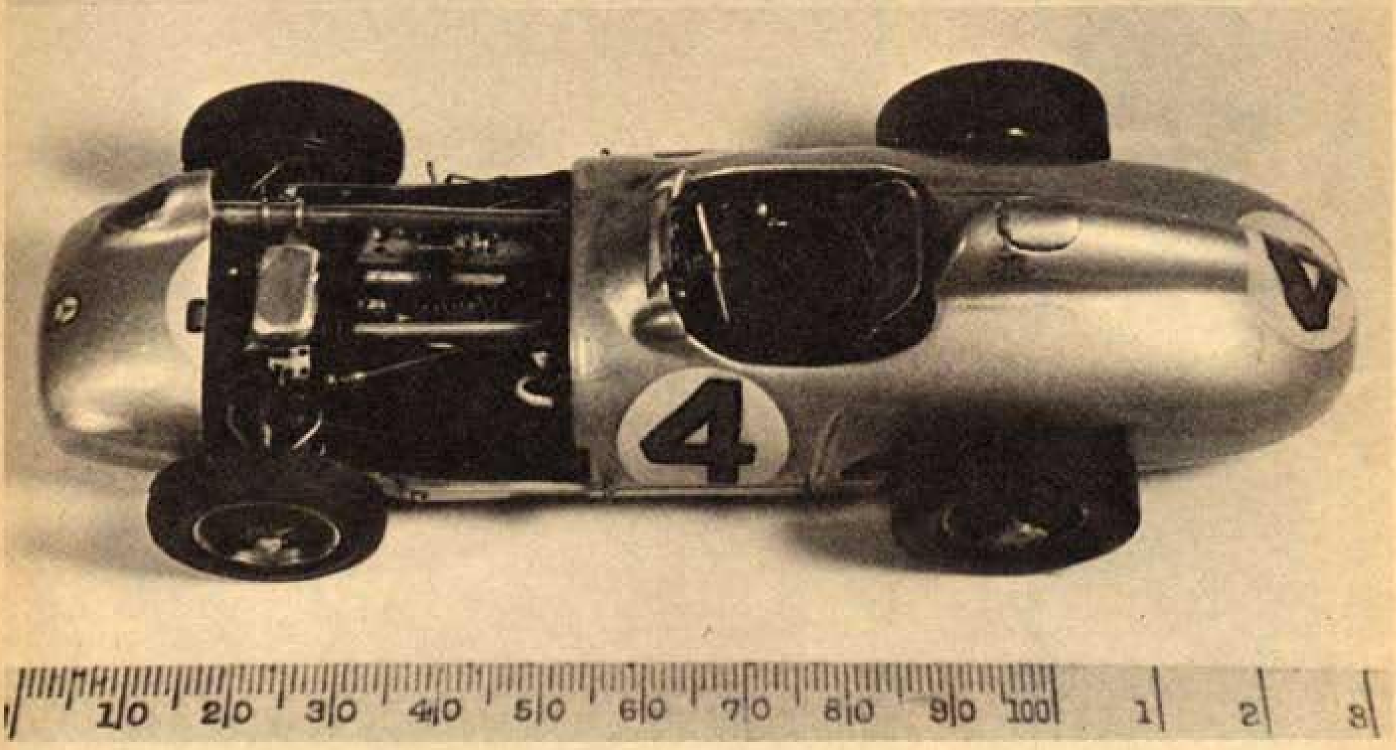




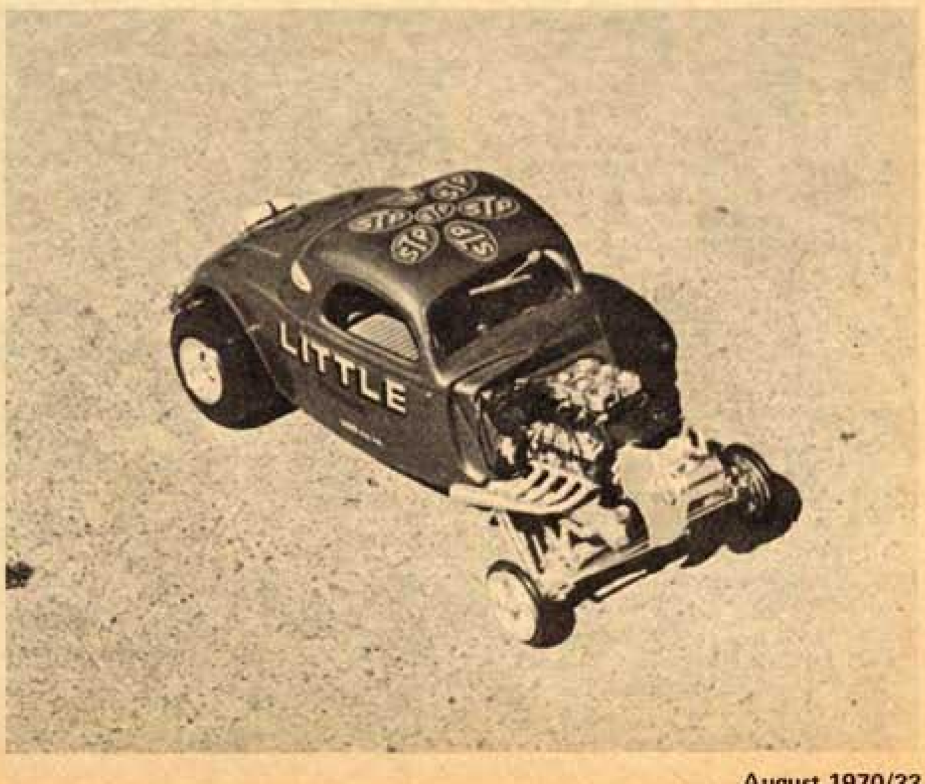
Rarely have I seen a model detailed as well as the Mercedes W196 by Graham L. Green, 336 Guildford Road, Birkdale, South Port, Lancashire, England. The power for this jewel is a MKI model railroad motor fed through 3-to-1 Bevel gears. Gears? Power? That's right, this is a 1/32 scale slot car folks! The chassis was made from piano wire and brass tubing to duplicate the "birdcage" type of chassis in the real car. The motor is located under the driver's compartment and helps to keep the frame rigid. The engine block was made out of plastic and painted in suitable metallic colors. The radiator was made of card stock and wire gauze, and the header tank out of aluminum. The fuel and oil tanks were carved out of balsa wood and painted silver. The dashboard was made out of aluminum with a full complement of wired gauges. Wires for the handmade nylon flag are routed through the frame tubing to the motor. Congratulations on an outstanding model Graham, your Dremel tool should be in the mail soon.





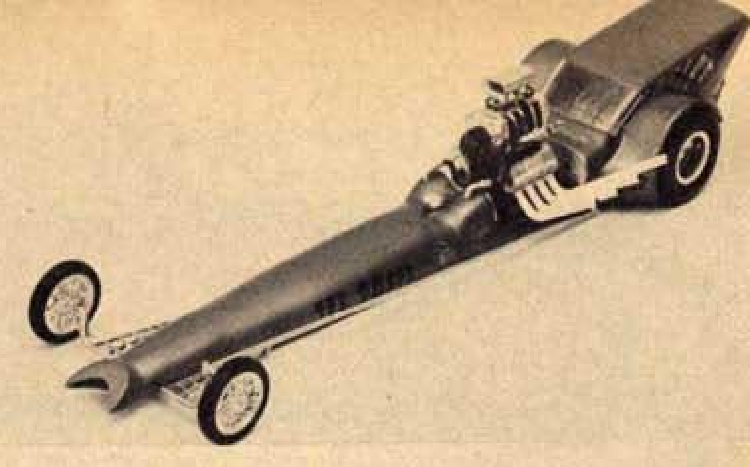


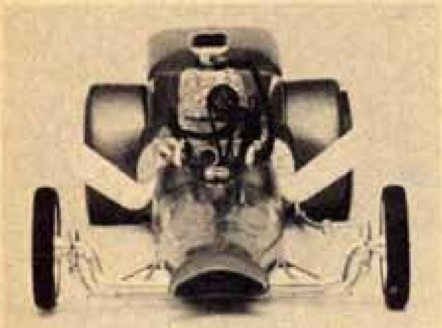


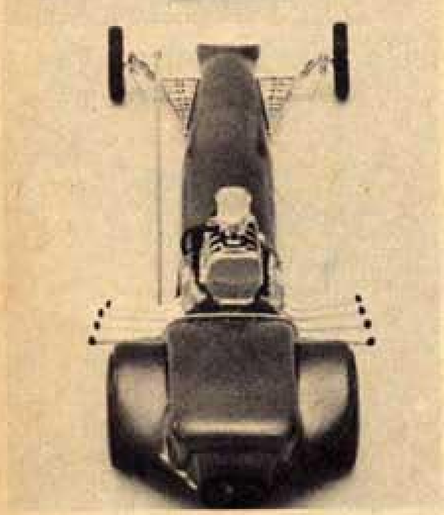


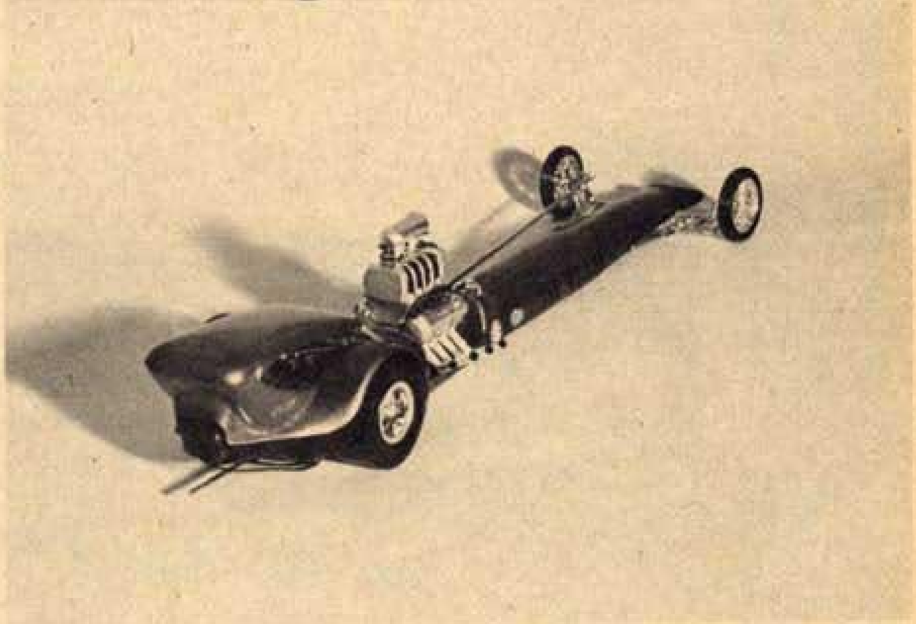
Tony Sebbio of Warren, Ohio built his "Little Dominator" from left over parts in his scrap box. The AMT '36 Ford coupe body was painted with four coats of AMT surf green. The front end, including mag wheels, are '68 charger components. The slicks came from the AM-Xpress. The 389 Pontiac mill was detailed using thread and telephone wire. Nice looking rig Tony!

One of the cleanest and nicest renderings of Monogram's T'rantula was built by Robert LeSage of Alberta, Canada. The body was lengthened 2-1/8" and stripped of its louvers and bulges to give it a leaner appearance. The engine is stock from the kit but the headers were modified to eliminate the spider leg look and a GMC blower added. Two coats of candy green over metallic silver add the final glistening touch.



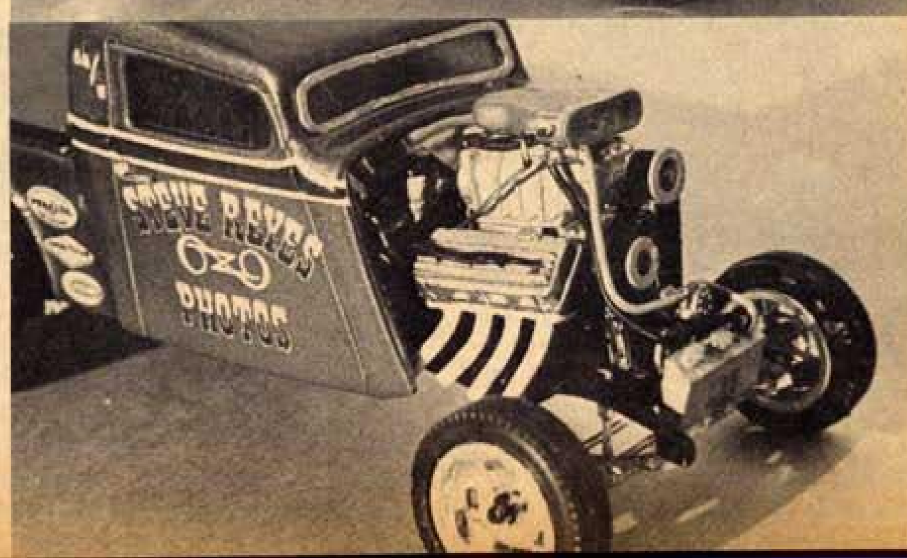




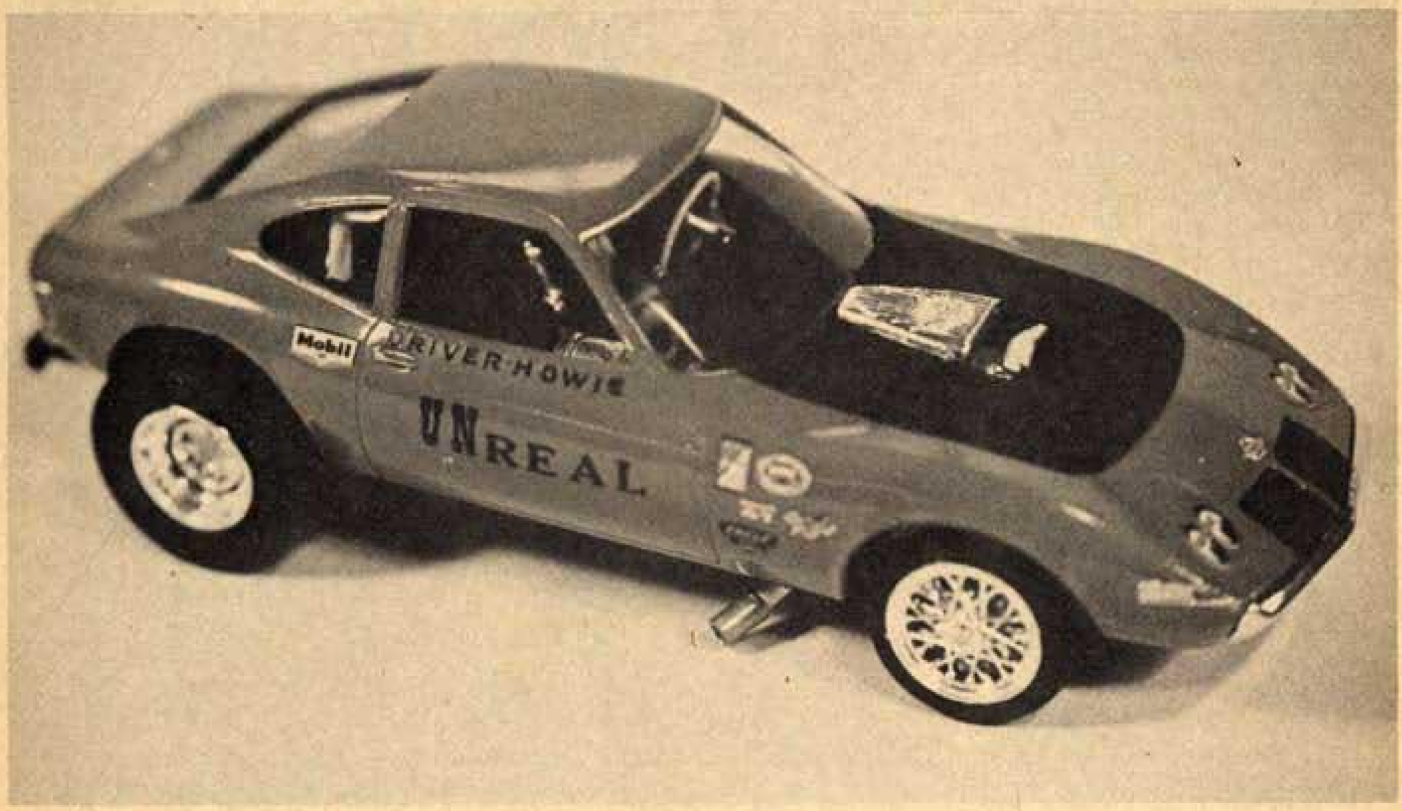


Our article on converting the AMT Willys into a pick-up has created a flood of similar conversions and here is the pick o' the litter, byilt be Wallace Jackson Jr. of Richmond, California. The amount of work put into this, including chopping the top, could almost qualify it as a "scratch built." The Willys van was chopped off just aft of the door and a modified pick-up bed was molded into the cab. The hood was cut to clear the injector and valve covers. All body molding and filling was done with plastic that had been melted in liquid cement. The engine uses the Ford block from the Willys kit, with valve covers from a Garlits kit and a blower from Revell's engine kit. The explosion-proof blanket for the transmission was made with red bias seam tape. All details are included on the car. The fenders and hood were painted with shimmering green and the remainder of the body painted with radiant lime. The lettering was done with Letra-Set rub-on letters filled in with paint.

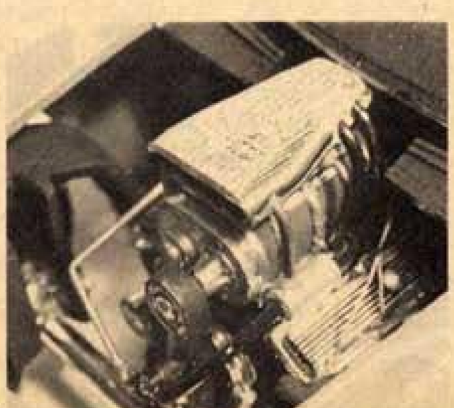


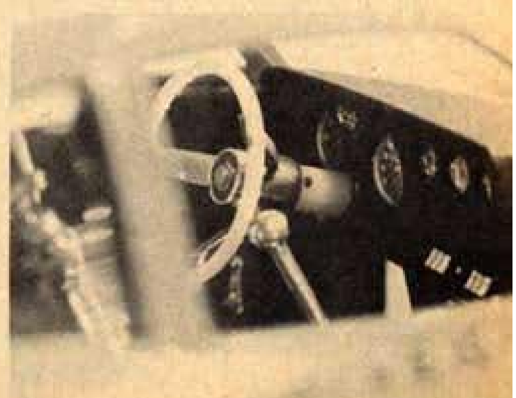




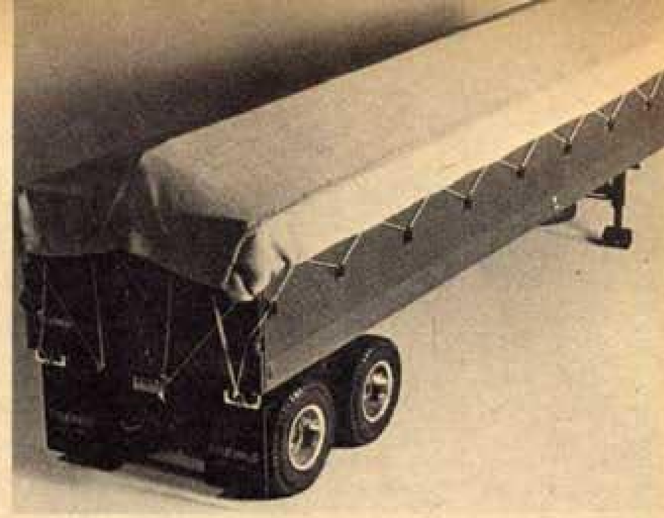


Kaal Hackathorn of Elmire, N.Y. has given me an idea of what it feels like to be three inches tall, with some fantastic macro photos of his Opel G.T. coupe. The 427 rat motor was chosen to propel this model of F.M.'s Mini-Vette. The luggage space was covered with sheet plastic to give the appearance of aluminum paneling. Details include full wiring, gauges, fire extinguisher, roll bar, fuel shut-off valve, kill switch, chute and shoulder harness. Testor's red was rubbed out with toothpaste between each of four coats.









KING OF THE ROAD

AMT's magnificent Peterbuilt truck is truly one of the . . . . .

By C.M. Kroack

Peterbuilt trucks are manufactured at Newark, California in one of the newest and most advanced truck plants in the country. A Peterbuilt manufacturing claim is, "no mass production or automated assembly lines." Each Peterbuilt is custom built with the customer's specific job requirements in mind. Thus, a customer can virtually design his own truck from start to finish.

With the advent of AMT's 359 Peterbuilt truck kit, the modeler can design his own custom built "Pete." All custom features on my Peterbuilt 359 conventional tractor model can be found in the Peterbuilt parts and accessories catalog. One Peterbuilt feature is the distinctive white engine custom built to their specifications.

My model features the new sleeper box just recently released by AMT for the Peterbuilt truck kit. It also features steerable front wheels.

I would like to thank Keystone Peterbuilt Inc., Lancaster, Pa., for their kind help in supplying sales brochures and the parts and accessories catalog used in this project.

My model features just about every accessory available for Peterbuilt trucks. A real truck with similar equipment would cost $20,000 or more!

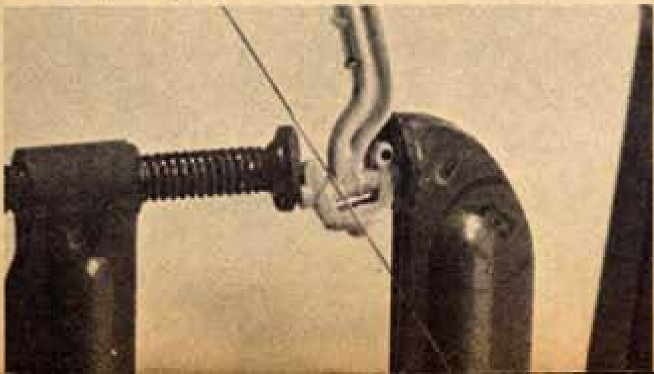
Trailers featured with the Peterbuilt are AMT's Fruehauf F.B. Beaded Panel Van kit. The other trailer is an AMT van "cut down," (complete with a tarp) into a grain-hauler, bulk commodity-type trailer.

August Fruehauf and Otto Neumann, a blacksmith, began building semi trailers at Fruehauf's Detroit blacksmith shop in 1914. This pioneer trailer company, still going strong today, created a new dimension to the infant trucking industry. Trailers were crude at first, but increased loads reduced expenses. Fruehauf soon added improvements and innovations to these crude trailers. Any items not mentioned or shown by photos are built according to the Peterbuilt and Van trailer instructions sheet by AMT.

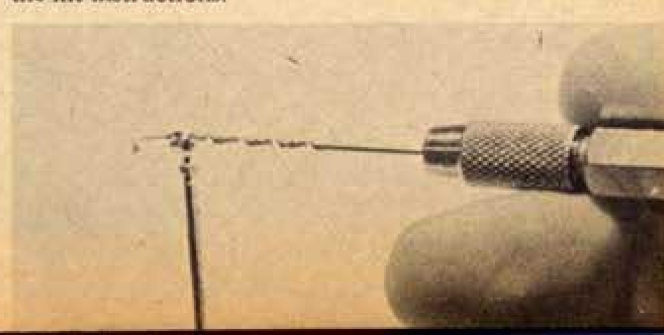


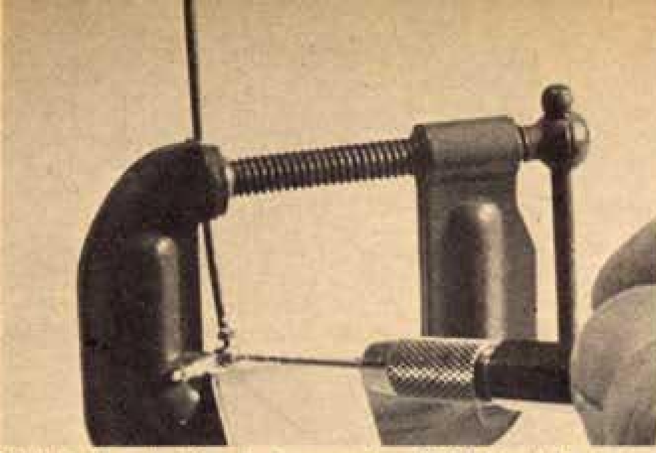
Select a drill slightly larger than a 00-90 jeweler's screw. Drill a hole completely through each axle end.

Using a jeweler's saw, carefully saw through the top and bottom of each axle end. Insert a 00-90 hex-head jeweler's screw through each axle end for a king-pin. Add a nut to the bottom end and tighten, allowing the axle ends to steer. Add a drop of epoxy to each nut.



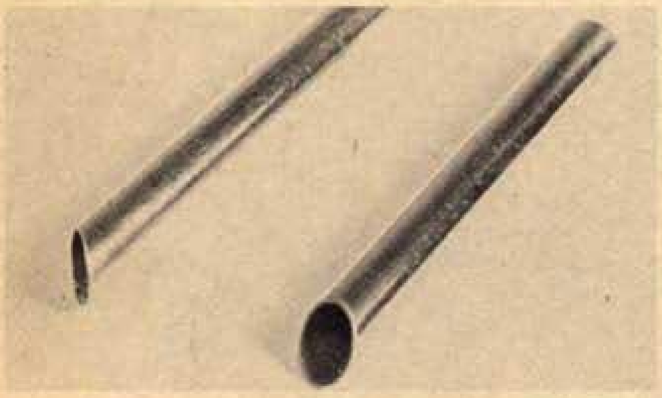
Insert a jeweler's screw through each tie-rod end. Add a nut, tighten to allow the tie-rod to move. Cut off any excess screw length; add a drop of epoxy cement to each nut. Using epoxy, cement tie-rod to axle at the points indicated in the kit instructions. Cement drag link to the stationary part of the axle and to the frame as indicated in the kit instructions.

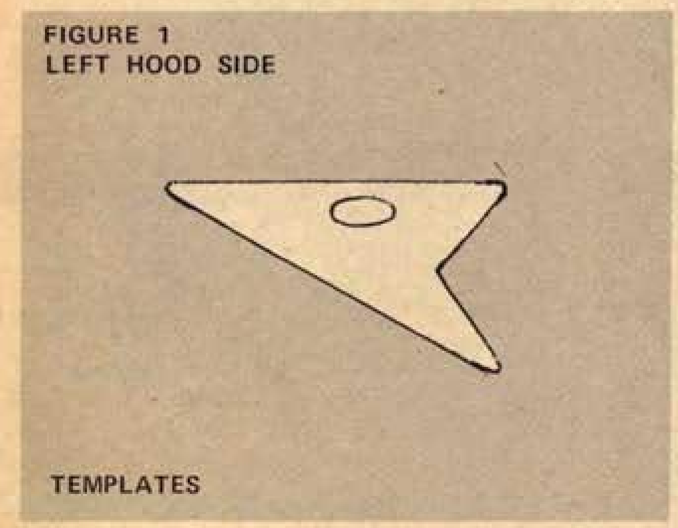




Drill out each tie-rod to accept a 00-90 jeweler's screw. Carefully saw through each tie-rod end below the ball.

To increase height of exhaust stacks, cut two (2) pieces aluminum tubing 1-7/8" by 3/16" diameter. This increases the height of the stacks from 1-15/16" to 1-7/8". Cement tubing in place over the original stacks. Set aside to dry.





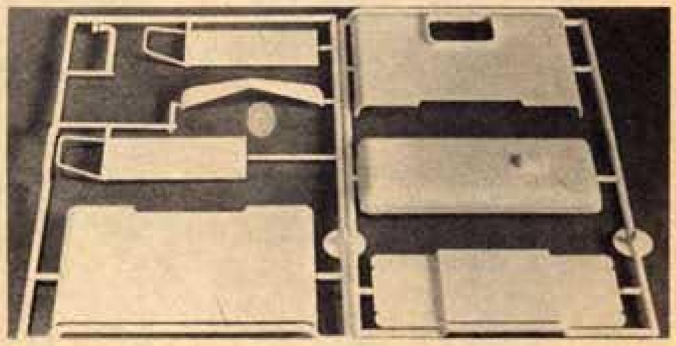
Hood sides accent panel designs are "homemade" decals. Obtain a roll of parcel sealing tape (the type that has to be wet to stick). Select the desired width. Tape the glue side up to a flat surface. Spray with several coats of the desired color, let dry thoroughly. Spray several coats of clear over the paint. Let dry overnight. Use the template in figures 1 and 2 to cut out the design. Wet the model and soak the decal in water, place in position, blot dry with a soft cloth. It conforms to all details, such as rivet heads, etc. Various widths of striping tape can also be made using this method.

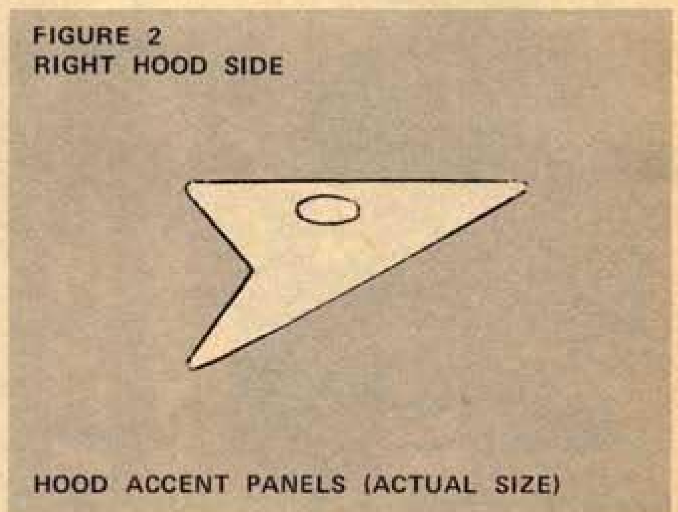




Assemble mufflers as per instructions. Cut two pieces of fine mesh brass screen – 1-15/16" by 1-3/16". Form to shape and cement to each muffler, using epoxy. Keep the seams at the back of the mufflers (side next to truck cab). Add a strip of 1/16" chrome tape to the top and bottom of each muffler.

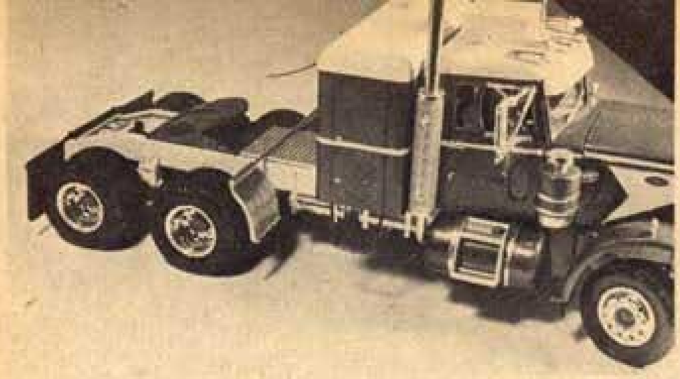
This is AMT's new sleeper-box kit to accompany the Peterbuilt truck. Assemble sleeper box. The roof vent should be on the left side. Prime and paint color of your choice. Omit rear window frame from the truck cab and line up the sleeper-box "crawl through boot" with the rear cab window.





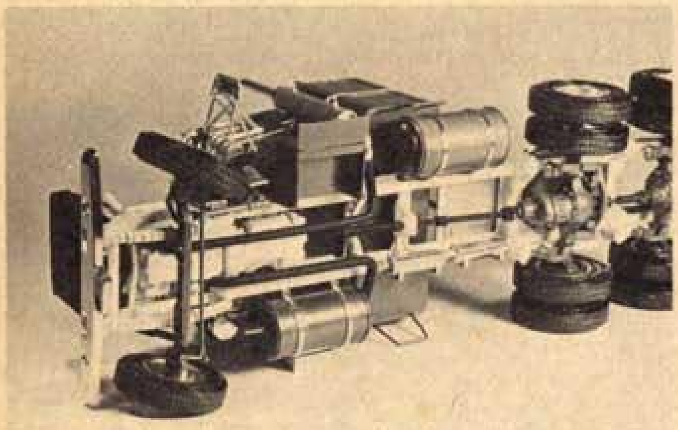
Paint rear tractor mud-flaps flat black. Use an X-Acto knife to scrape the paint from the Peterbuilt lettering and the raised oval. Connect mud-flaps together using either Plastruct or metal tubing 1-7/16" by 1/8" diameter. Cement this unit to the rear crossmember with tubing resting on the rear license and tail light bracket.





Tractor rear quarter fenders are made from the IMC Dodge L-700 fender flaps. Paint silver, except for the bottom flap section. Use a piece of tubing 3-3/4" by 1/16" diameter to connect the quarter fenders. Cement across the deck-plate 3/8" ahead of the fifth wheel plate.

This is how the underside of the completed tractor should look.

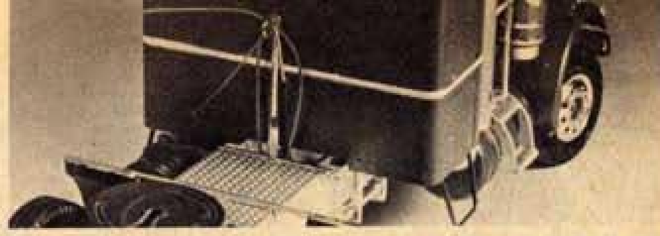




Add sun visor to top of the windshield. Add air conditioner unit and license plates.

AMT van suspension and wheels assembled, ready to install on trailer.

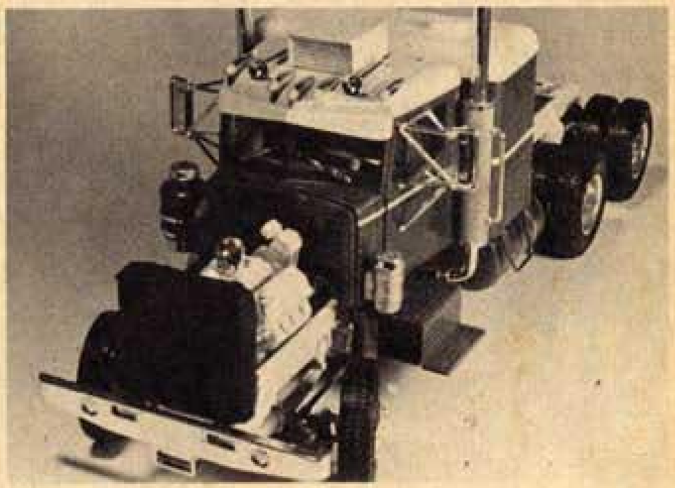


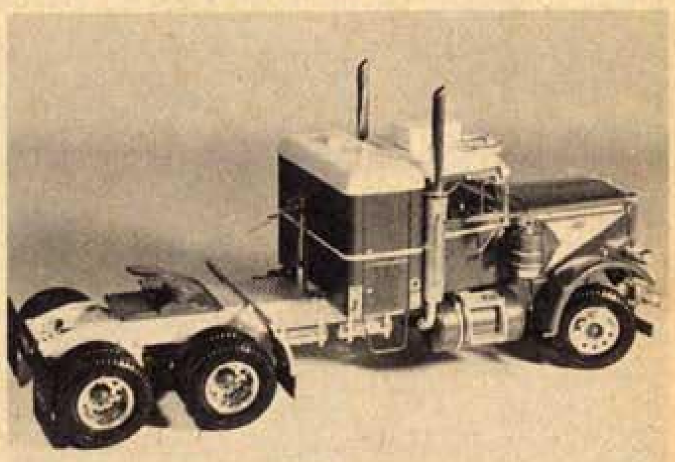


Cut two pieces of model airplane hook up or bell wire approximately three inches long (check with trailer hooked to tractor to be sure of exact length). Drill two holes to accept the wire 1/8" on each side of the pogo stick. String wire through each hole and cement to the underside.

Cut a piece of small diameter monofilament fishing line the same length as the air hoses for the trailer electrical connections. Drill a small hole at the rear of the pogo stick. String monofilament through the hole and cement to the underside.

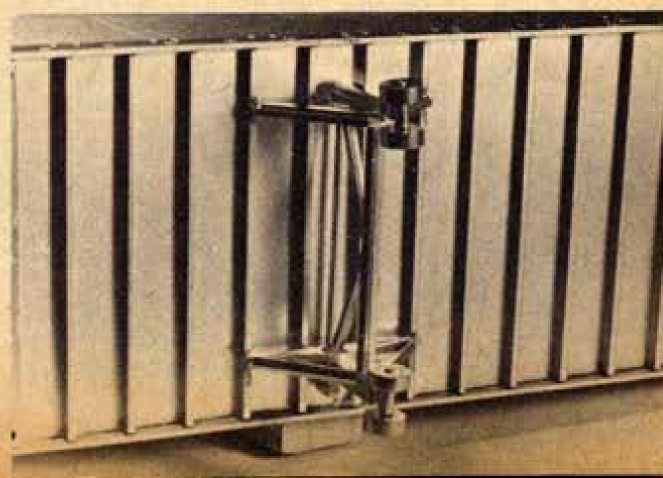
Completed tractor with hood and fender unit removed.

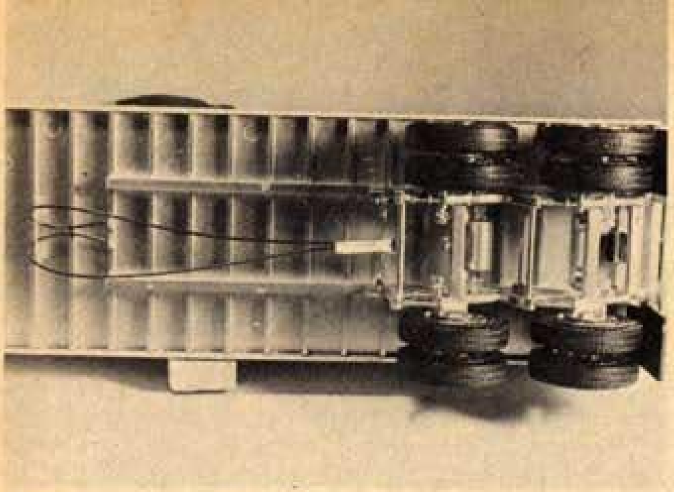




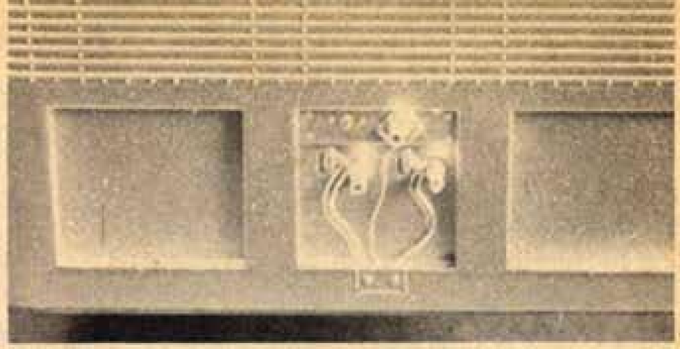
Completed tractor ready for a trailer to pull!

Front underside of completed trailer.



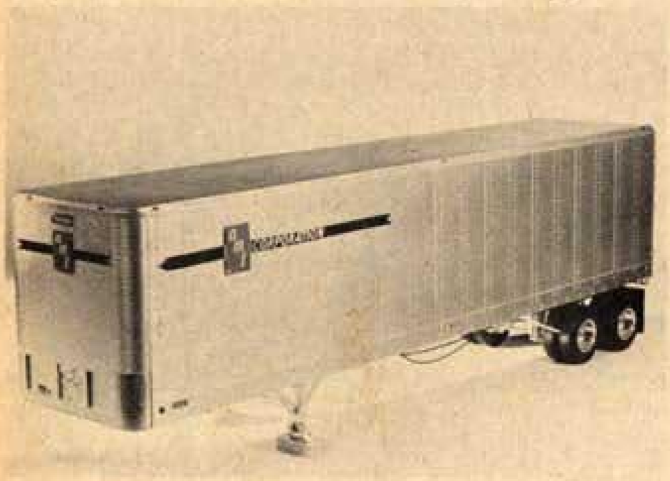


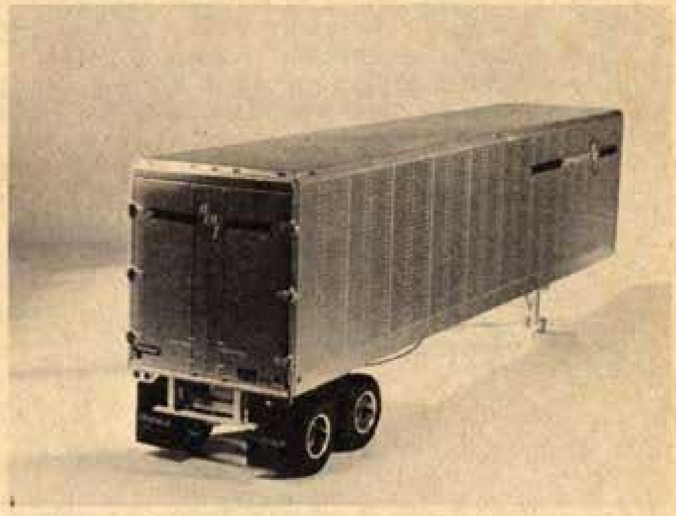
Rear underside of completed trailer.



Drill three 1/16" holes in the trailer front, one at each air-hose connection point and one at the electrical hookup point. Cut three pieces of tubing 1/4" by 1/16" diameter. Epoxy these into the holes, leaving 1/8" extended outside the holes. Air hose and electrical connection will "plug" into these.

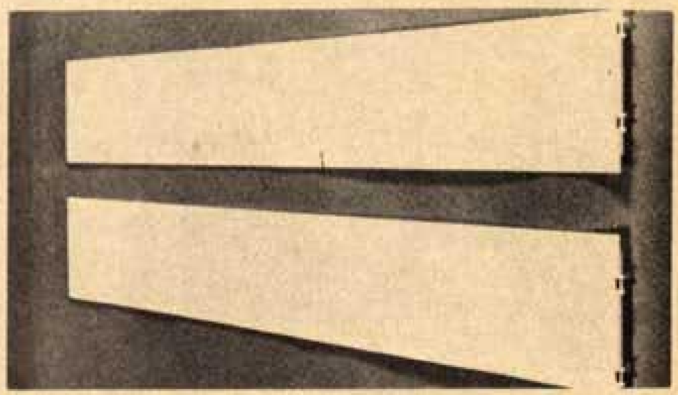
Completed van with all decals and license plates in place.





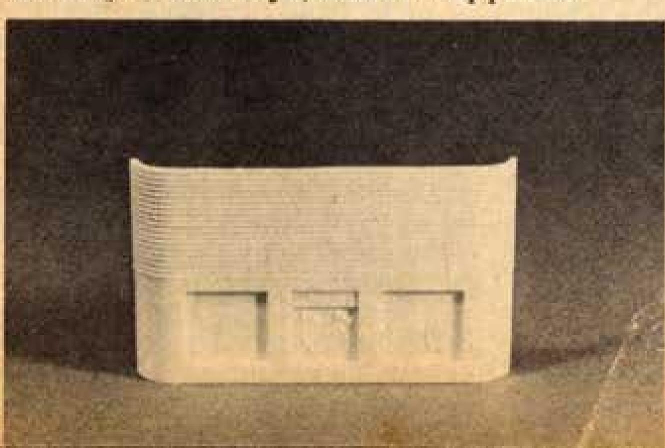


Here is our AMT Fruehauf van hooked to the Peterbuilt tractor ready to roll with a load of AMT model kits (new truck kit releases, I hope!).



If you desire to make a second trailer, in my case a grain trailer complete with tarp, measure 2-1/4" from the bottom edge of each trailer side. Saw the entire length of each side and discard the top portion.

Measure 2-1/4" from the bottom edge of the trailer front. Saw along the entire length, discard the top portion.



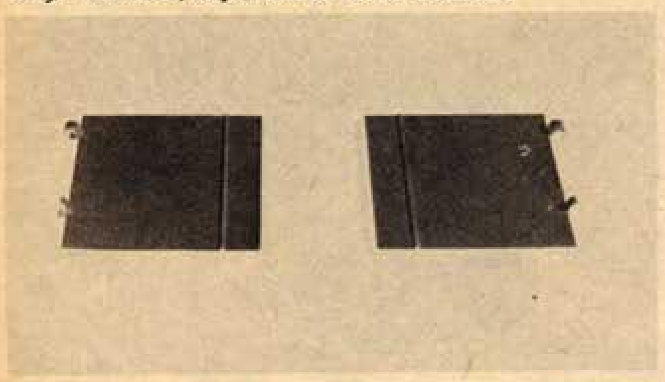
Cut one piece of Plastruct H-Column (H-4) 1/8" square and bend to conform to shape of the trailer front. Cement to the top edge. Sand top edge smooth and putty where necessary. Prime and paint. Paint to color of your choice.

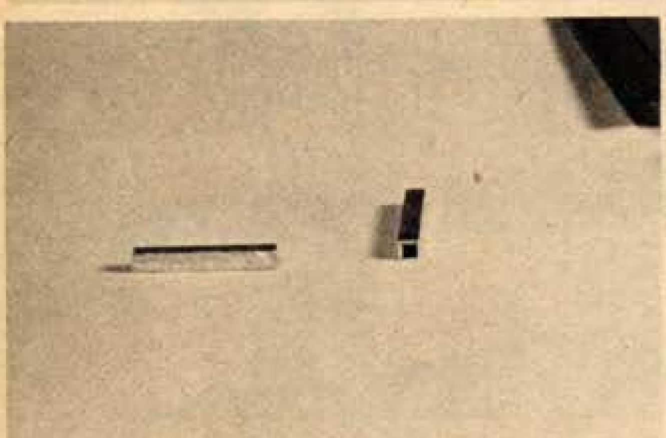




Cut two pieces Plastruct, (H-4) 1/8" by 15" and two pieces (H-4) 1/8" by 3-3/4" for each trailer side top edge. Cement to top edge. Sand, putty, prime and paint. Paint to color of your choice. I selected AMT's Devil's Red to match the tractor color.

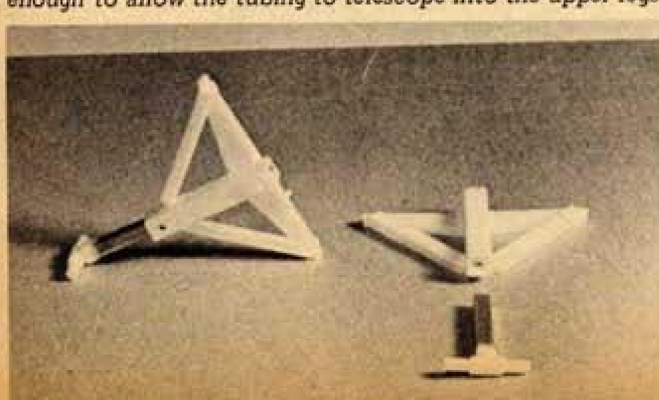
Measure 2-1/4" down from the top of each van door and saw off. This will allow the doors to conform to the height of the trailer sides. Sand smooth, prime and paint. Cut hinges to conform to the door height and cement doors and hinges to trailer, as per trailer kit instructions.

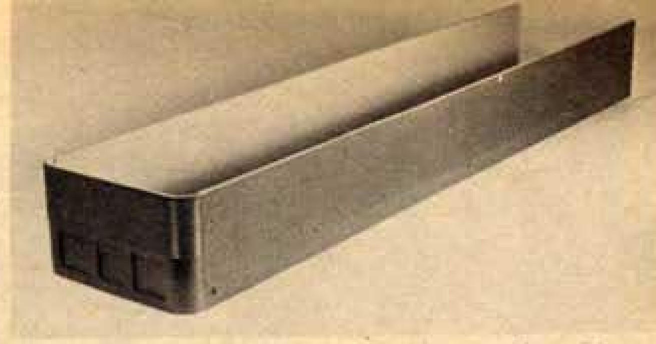




To make a "working landing gear" on the trailer supports for the two trailers, cut two pieces of 1/8" by 1/8" by 7/8" square brass tubing.

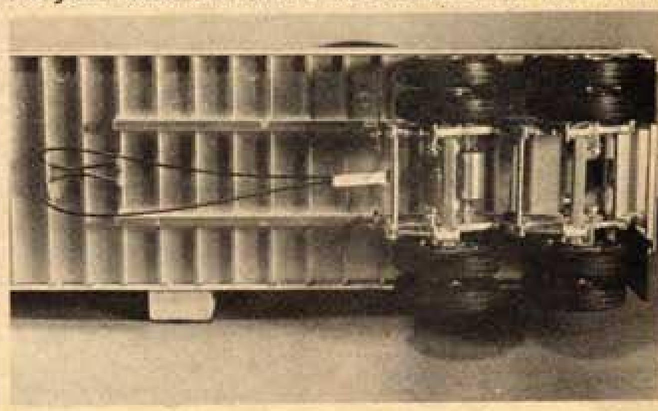
Assemble upper support leg assembly as outlined in trailer instructions. File the inside of each upper leg assembly to accept the brass tubing. This should be a snug fit, just loose enough to allow the tubing to telescope into the upper legs.

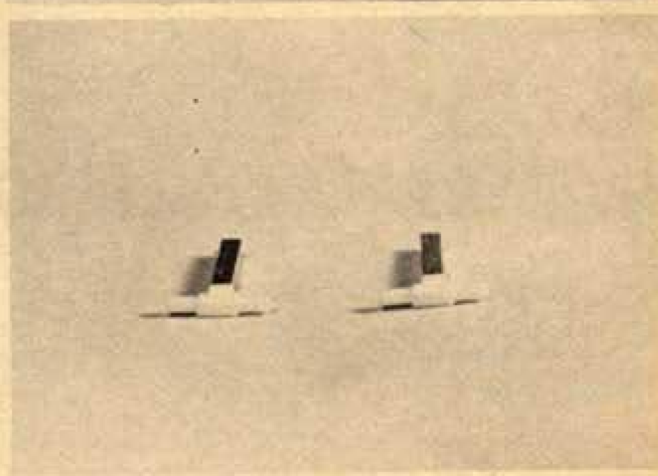




Cement trailer front and sides to the trailer floor. Cut one piece of Plastruct Beam (B-8) 1/4" by 3-5/8". Cement in place at top rear between the trailer sides, keeping it in 1/16" from the extreme rear of the sides. This serves as a support between the sides and also as a support for the rear doors when they are closed.

Assemble complete trailer underside, suspension wheels and upper coupler assembly per kit instructions. Paint underside color of your choice. I chose flat black for the underside of the grain trailer and AMT's Devil's Red for the wheel hubs.





Cement the shortest lower leg support extension into one end of each brass tube.

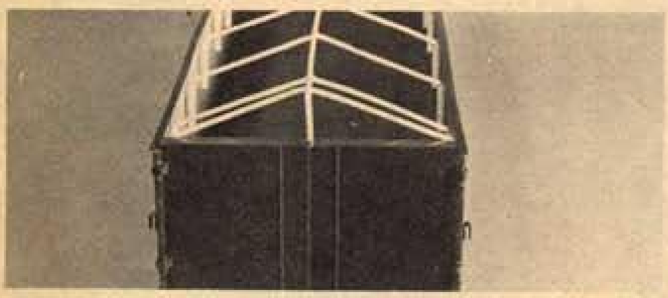
Measure 1/8" from the bottom end of the upper support leg and drill a 1/16" diameter hole completely through. Insert a length of wire or pins to hold the legs in the lowered position. As the lower legs are a snug fit they will stay in the raised position. Assemble the landing gear support to the trailer underside, per the kit instructions.

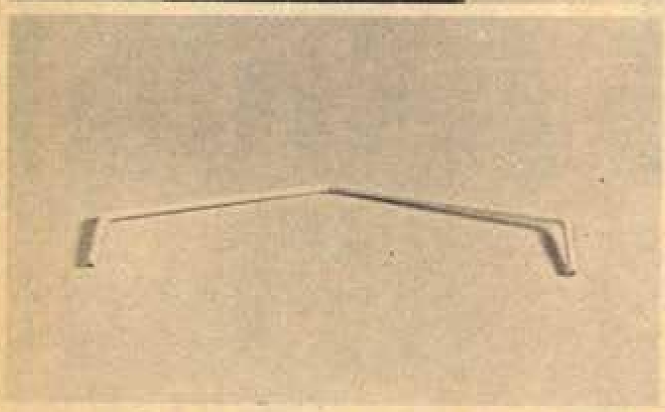




I have added a spare tire. This is optional and can be omitted. Cut one piece of Plastruct channel (C-8) 1/4" by 2-11/16". Heat and bend 5/8" from each end for the cross pieces. Cut one piece (C-8), 1-5/16" in length. Heat and bend 3/4" in from one end. This is the other cross piece. Cement the two crosspieces together. When dry, cement spare tire and wheel to the spare tire rack.

The rear "marker" lights will have to be added to the bottom of the trailer. Cut one piece of Plastruct Angle (A-6) 3/16" by 3/16" by 1-3/8". Cement the three rear marker lights to this. Cement completed unit to bottom of trailer between the bumper uprights. All other trailer lights and reflectors are as shown in trailer instructions. All rear lights are red. All front lights and reflectors are amber, including the middle ones on each side.

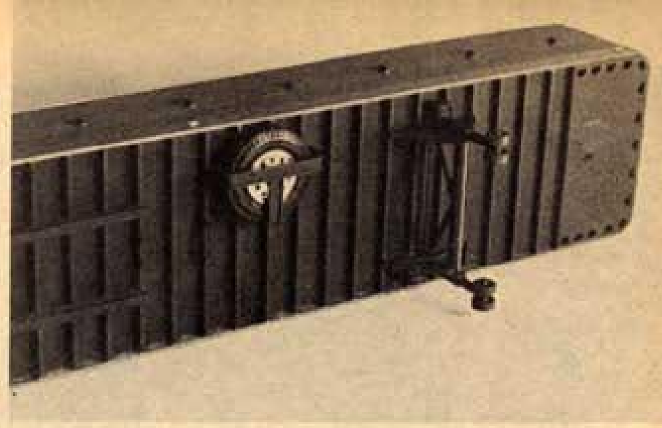




Measure inside trailer width and bend to shape shown in photo, eleven (11) tarp bows. These are made of Plastruct tubing (T-B-2) 1/16" diameter. Shape of these bows can vary.

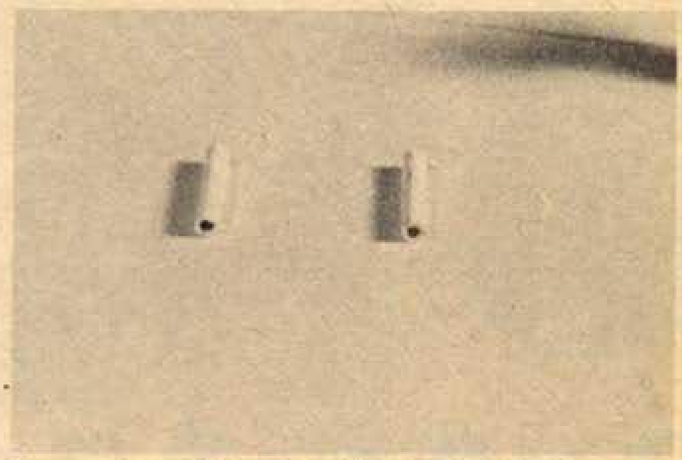
Trailer tarp hooks are dressmakers' hooks and eyes. The (4) front hooks are one inch on center, starting just around the corner on the flat area. Rear hooks are at each bottom corner. Two hooks are in the center. Place ten hooks on each side starting one inch from the front, two inches on center, for a total of ten on each side. This could vary some.

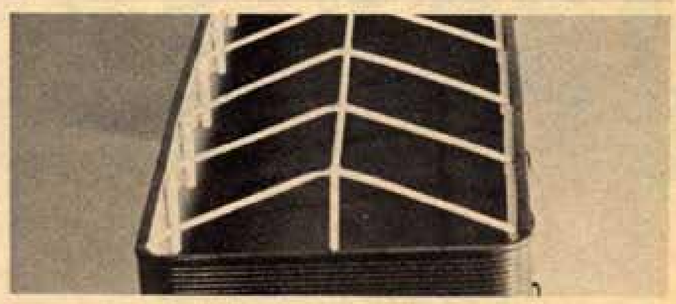




Cement the completed tire rack and tire to the right underside of the trailer between the 16th and 19th crossmember (from the rear of the trailer).

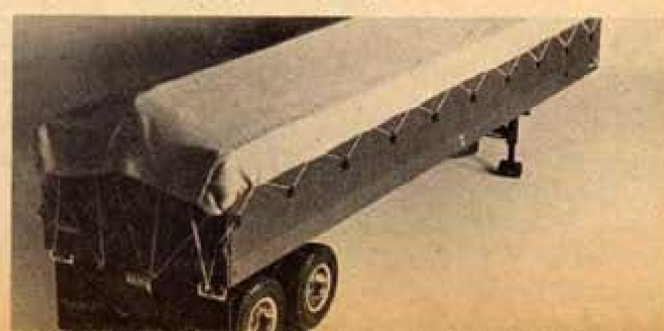
If a tarp is desired, cut 22 pieces of Plastruct tubing (T-B-4) 1/8" by 11/16" for tarp bow sockets.

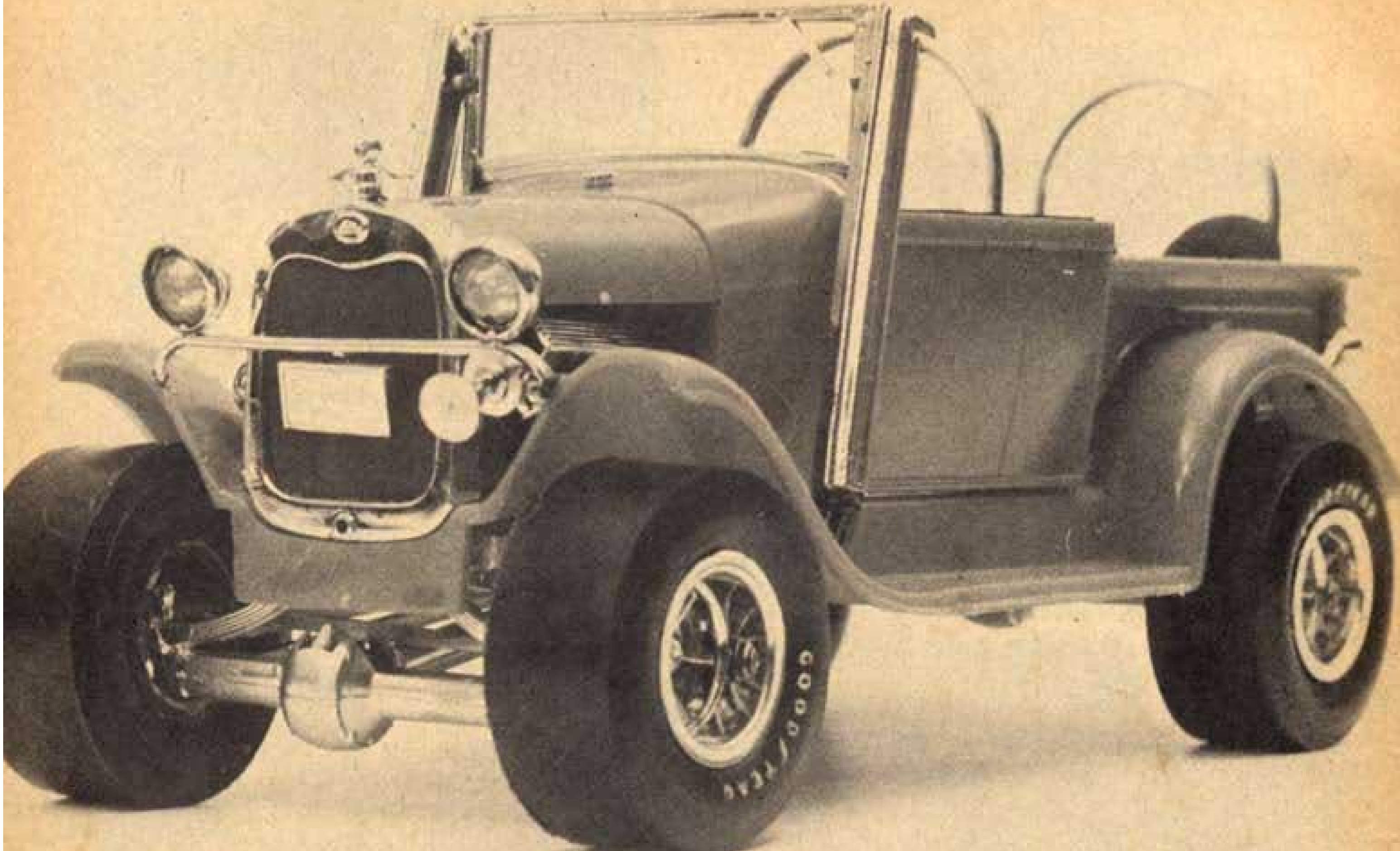




Insert bows into the sockets (two sockets to each bow). Starting 1/2" from the extreme trailer front, cement bows and sockets in place. Maintain two inches between each tarp bow for a total of ten. One will remain between the 11th bow and the rear of the trailer. Center ridge pole is made from 1/16" diameter Plastruct tubing (T-B-2), cemented to the center of each tarp bow over the entire distance of the bows.

Cut a piece of green, gray or dark brown cloth, 20" by 5-1/2" for the tarp. This size could vary some due to the thickness of material, etc. Sew the eye part of the hook and eye sets to the tarp edge to correspond with trailer hooks. Weave elastic thread through each tarp eye and to each trailer hook, keeping the tarp tight.





OFF-ROAD A-BONE

A four-wheel drive "Model A" from Monogram

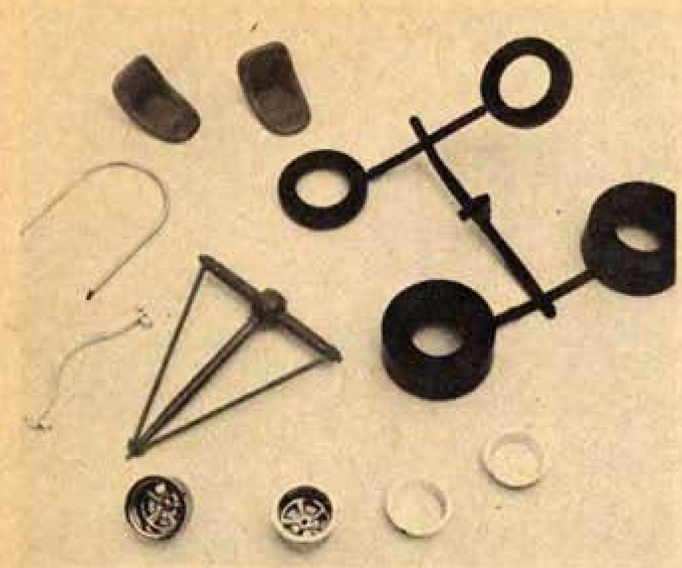
The Model A Ford was less of a tractor than the T, but a good many still saw the unplowed side of a farmer's furrow in the thirties. The mystic A Model is, then, certainly no stranger to the unpaved right of way. Similar near-new A Models made regular rounds over two-rut roads that today are considered strictly in the "off-road" category. Our 1970 Monogram version of the off-road Model A simply adds some of the more up-to-date technology to the proven boondocking performance of the Ford.

We would like to think that our vee-eight engined, four-wheel drive, Model A is an original idea. We'd be willing to bet, though, that several of our readers' fathers or grandfathers have built, driven, or seen similar conversions in the heyday of the real car. As built, the Model A incorporated the flexible frame and nimble suspension (with sky-high ground clearance) that today's off-road rod builders are trying to match.

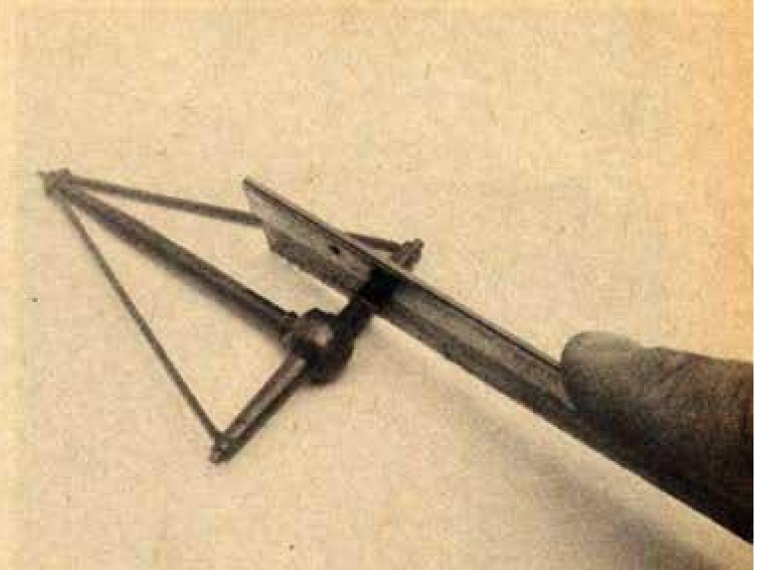
Monogram's new superdetailed series of three 1/24 scale rods; the "Ford Revolution", provided one of their number as the basis for our off-road rod. A pair of the Monogram "Boss 'A' Bone" kits furnished all the hardware for this conversion. If your sights are set on the Model T era of the Ford mystique, a similar off-roader could be assembled from the Monogram "Swee'T'ee." A more modern car could be converted to a mini four-wheel drive duner by utilizing the parts from the 1932 Ford in Monogram's "Son of Ford" kit.

The basic premise of an off-road conversion of any kind is to improve the vehicle's traction and ground clearance. In the case of any one of the three "Ford Revolution" kits, the plus-traction is gained from drag slick-wide tires on each of the four wheels. With power piped to the front axle, the front pair serve to steer as well as provide their share of the power-to-ground delivery.

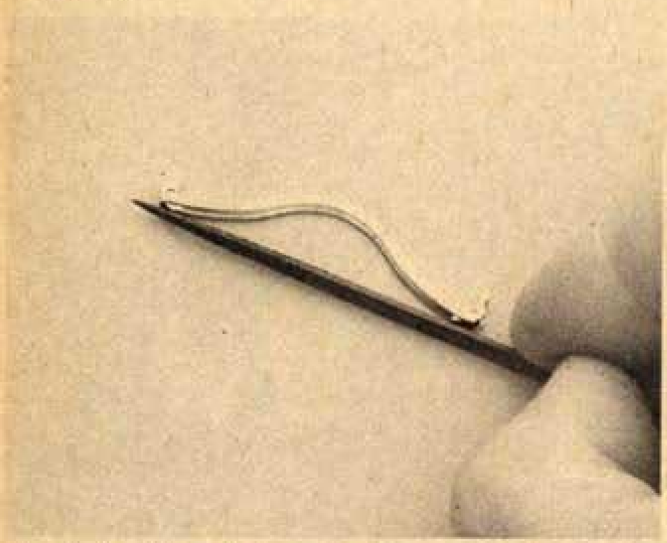
The "Boss 'A' Bone" has an Olds engine driving through a B&M Torqueflite automatic transmission to provide enough torque to twist those wide tires on each corner. The springs are mounted to give increased travel, on our off-road version of the kit, and the fenders modified to clear the super-wide tires. The Monogram kit's exterior dual exhaust pipes are rerouted up each side of the windshield for a bit of semi-trailer truck-like power appearance. Seats and rollbars for four allow the driver of our 1/24 scale "Off-Road A-Bone" to share his kicks.



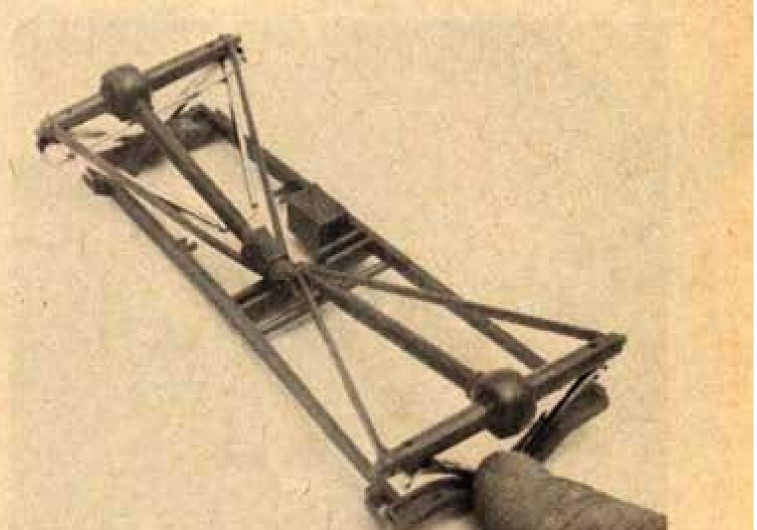
The entire rear axle, spring, wheel and tire assembly from a second Monogram "Boss 'A' Bone" will be needed for our off-road "A."



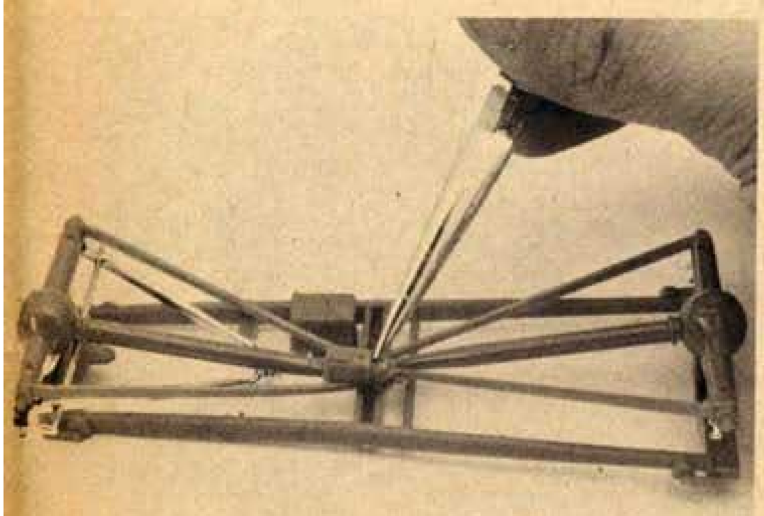
Section 1/8" from one side of the rear axle unit. Glue the cut pieces back together, trimming the short-side tie-rod to fit.



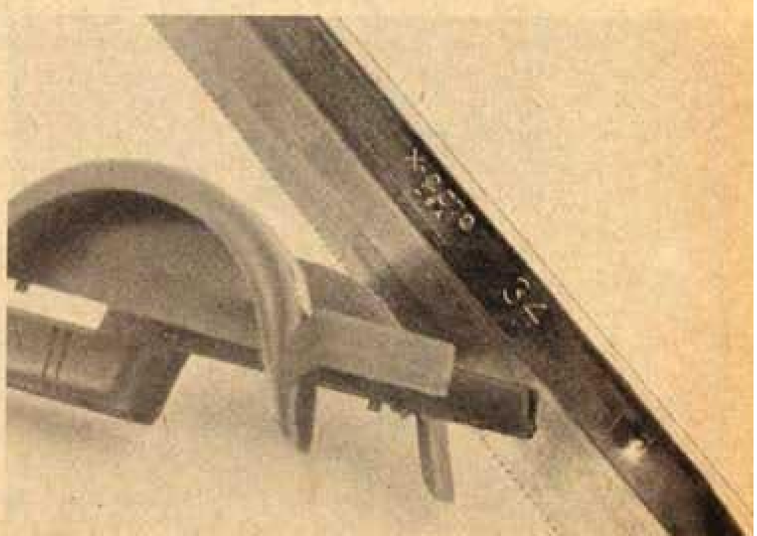
File the locating tabs from the bottom of the rear spring assembly. The rear spring from the second kit is arched 1/8".



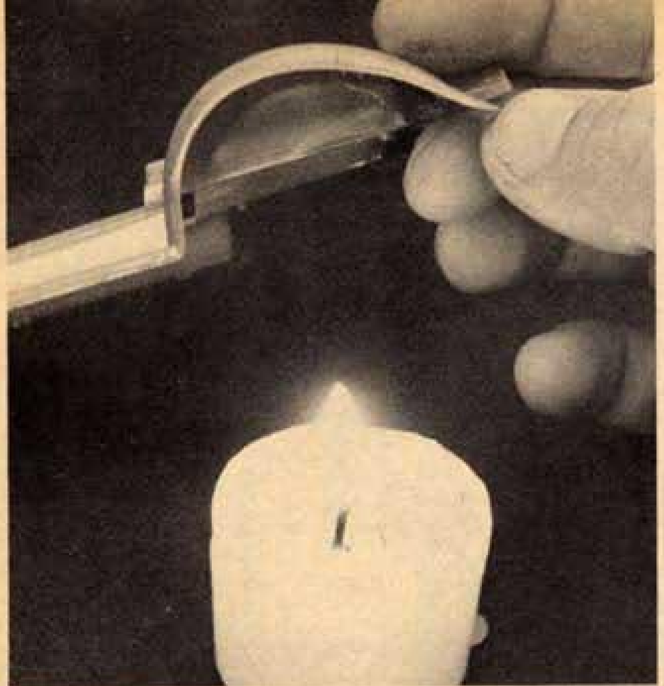
The shortened rear axle and tabless spring are glued to the front chassis crossmember with stock steering tie-rod. Re-arched spring glues in place at the rear mount.



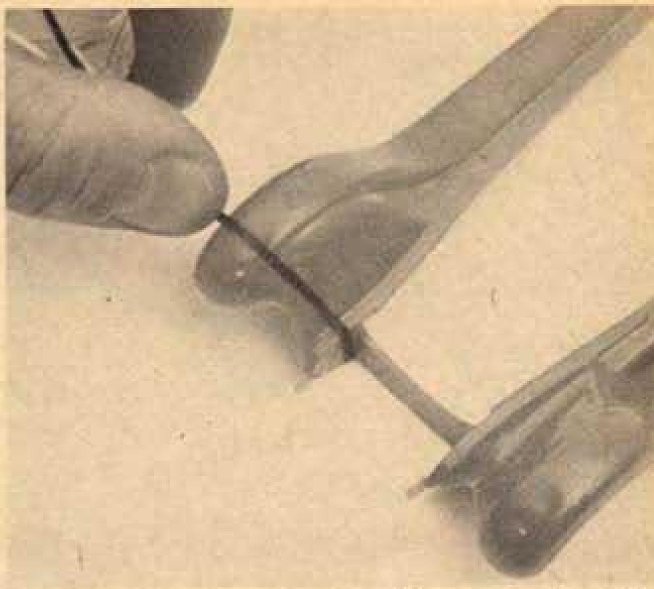
Cut the transmission from the engine in the second kit, file it hollow and glue beside the battery, as shown, to simulate the gear transfer case for the front drive.



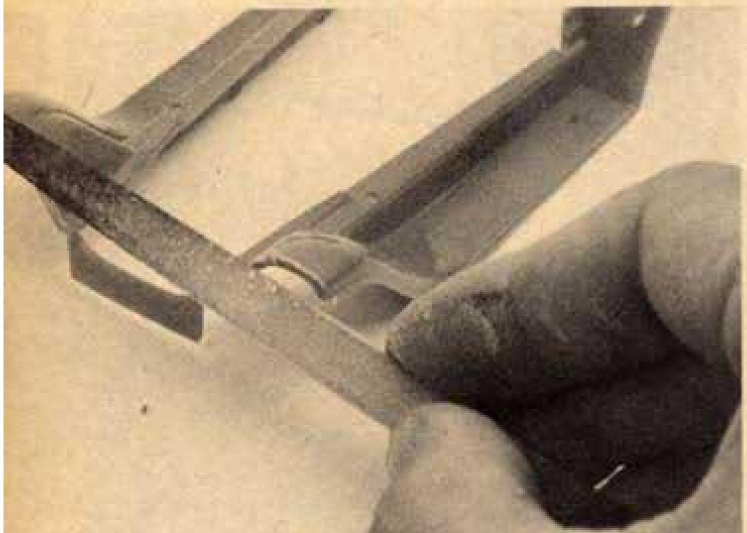
Slice between each rear fender and the rearmost frame rails with a razor saw. Cut all the way to the fender tops.



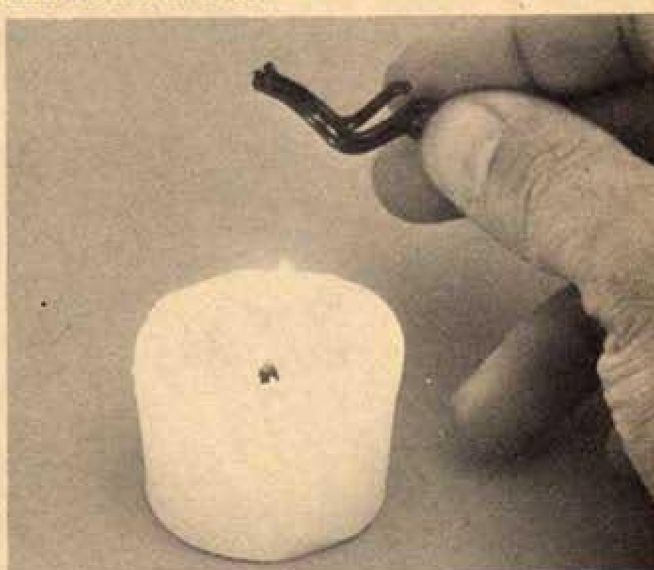
Heat the area just behind the peak of each rear fender, and, when just hot to the touch, pry up the rear fender tips.



Drafting tape or thin strips of masking tape can be used to mark the line where you want to shorten the front fenders.



You can "bob" the front fenders to suit yourself. Ours were sliced off to match the edge of the radiator. File smooth.



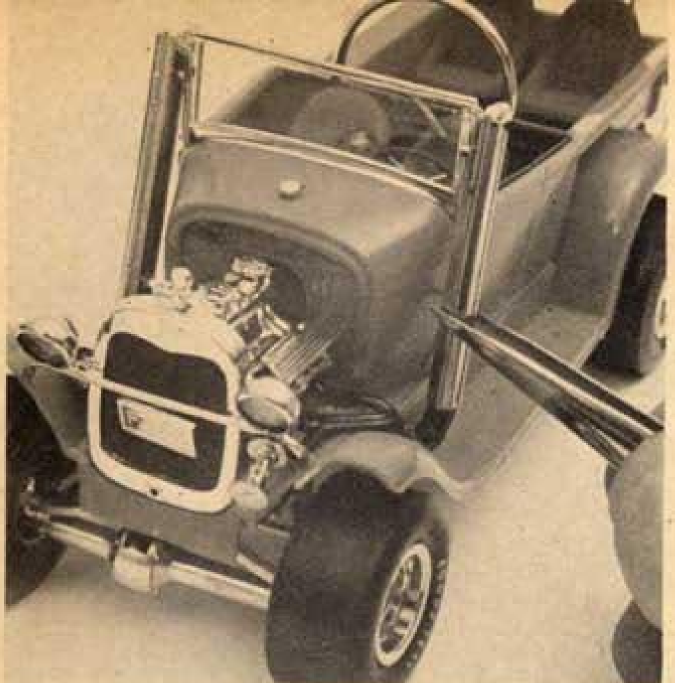
Heat the exhaust headers over a candle until just pliable, then bend exhaust pipe ends at a right angle and cool.



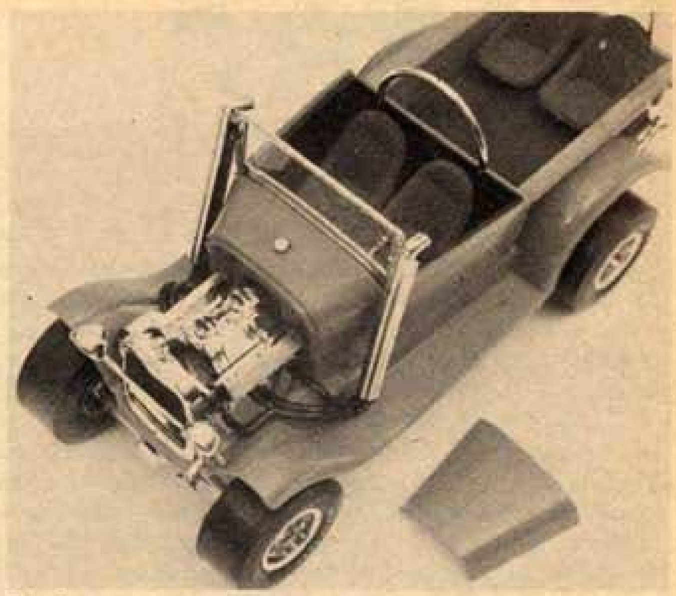
Practice heat-bending with scrap plastic first. Top header, in this view, is bent at proper angle, bottom header is still stock.



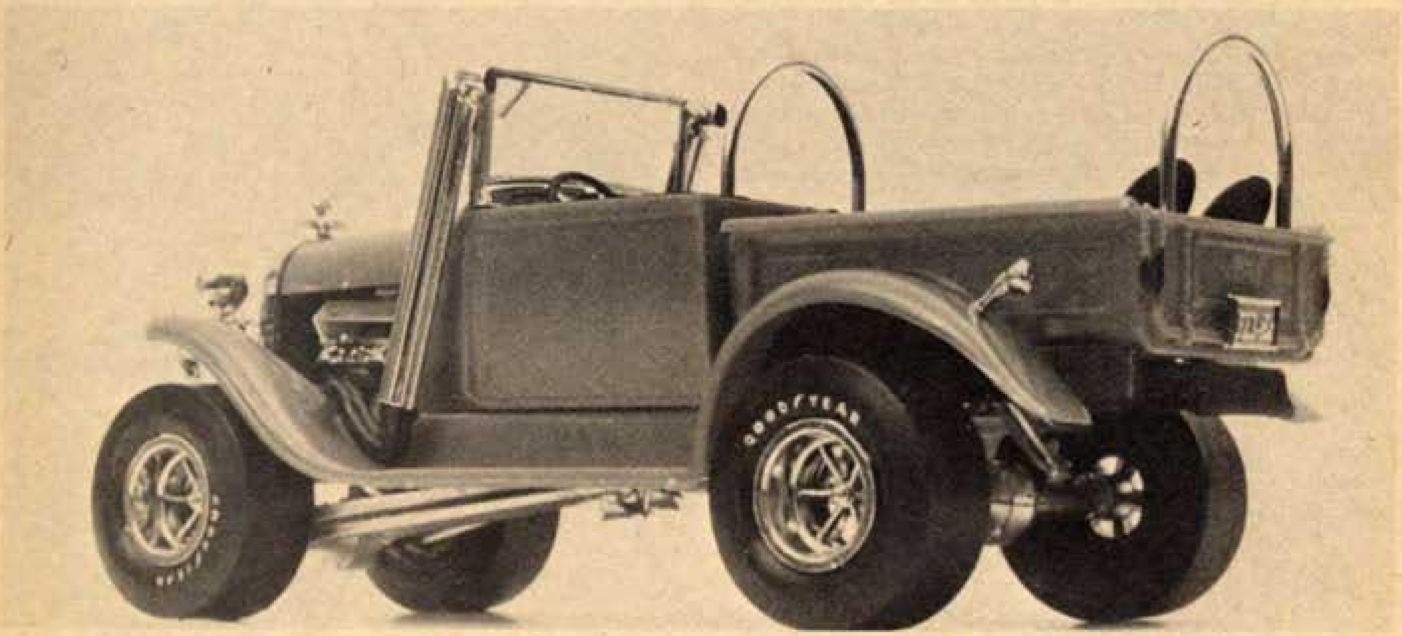
Body and all parts are primered and painted before final assembly. Second set of bucket seats and rollbar mount in bed.



Bends in exhaust headers allow the chrome exhaust stacks to be mounted upright like those on Mack trucks.



Hood on stock Monogram "Boss 'A' Bone" merely snaps in place. New front fender line is obvious in this view.





Except for that telltale differential housing beneath the grill, this could merely be a jacked up Model A. Our "Off-Road A-Bone" simulates a rod with four-wheel drive power, ample clearance.



MATRA

MRC's newest in the Parade of Giants



By Ben Millspaugh

On the back cover of a late issue of MCS is an advertisement by MRC (Model Rectifier Corporation). The ad shows a beautiful rear-three-quarter shot of their newest release,the Matra MS11. The ad reads,"Rear Wing has been removed from this model to show the unusual engine detail . . . " This is quite an under-statement!

To make an article interesting, the writer is expected to put unique detailing and modifications on a car but this Matra is so fantastically detailed that very little extra detail is needed! For this reason we are going to show mostly pics of the completed car. I might add, this car is definitely not for the casual beginner! It is difficult to build correctly, but with a little patience, the modeler can have a finished car that will, straight from the kit, "wipe out the competition."

What is Matra? For the Grand Prix crowd, this is an easy question, but for the average guy . . . it was France's bid to GP fame. The Matra skyrocketed to fame in the short span of some five years. The French company, Engins Matra, an aerospace firm, bought out a small firm, well known to the automotive world, by the name of Bonnet. In a short while, the basic engineering of the Bonnet firm was replaced by the concepts of Matra and the die was cast.

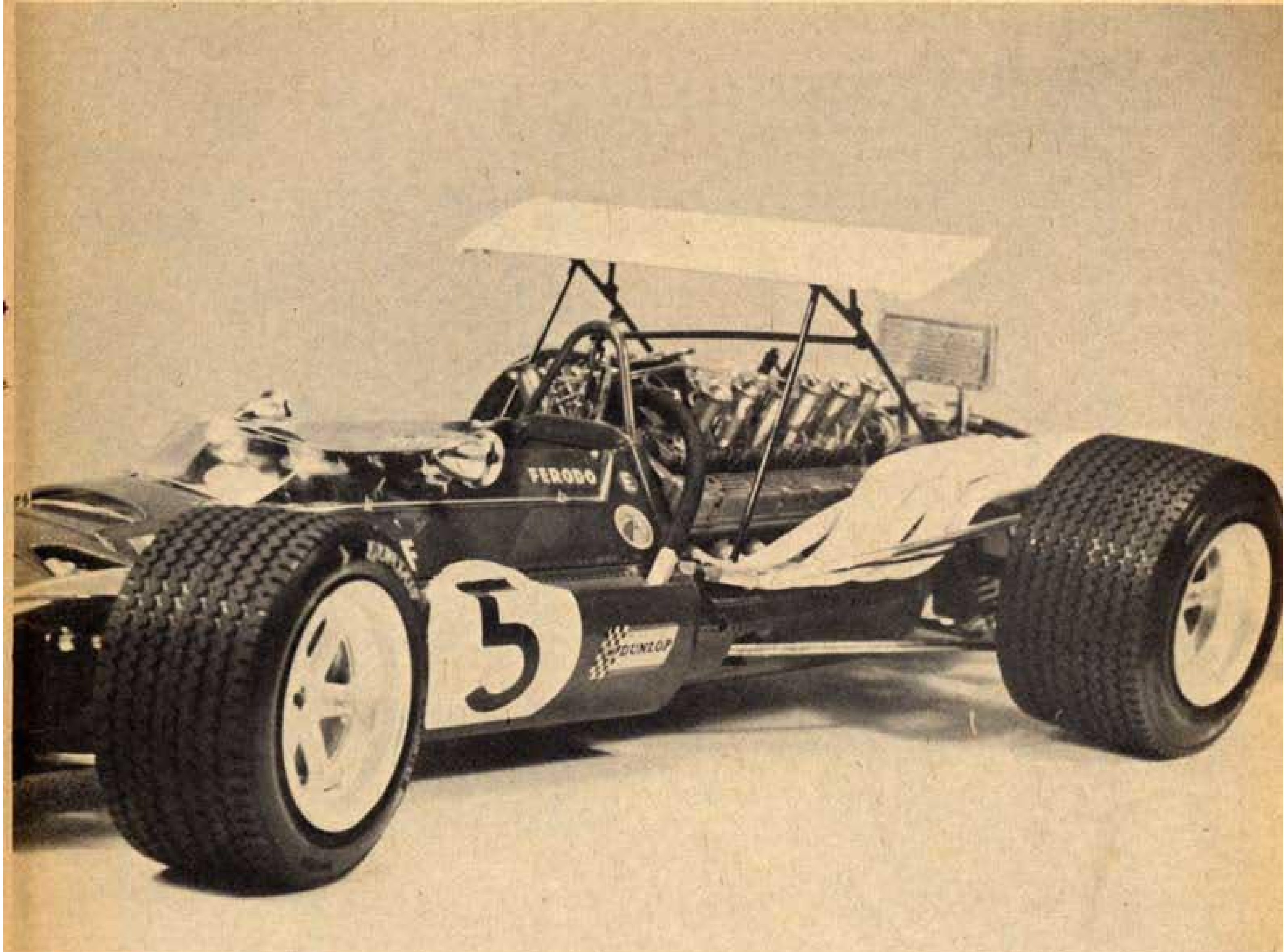
The Matra firm had a winner going for them, in 1965, in the formula three division. The next step, in the natural evolution of a forward thinking firm, was Formula Two. With such talent as Jackie Stewart and Jackie Ickx, success was inevitable. At about the same time, Jean-Pierre Beltoise and John Servoz-Gavin were "cleaning up" in Formula Three. The following year, Ickx won the European Championship, then came Beltoise and finally in 1969, Servoz-Gavin. The natural evolution, again, onward to Formula One. With the blessings of General DeGaulle, in the form of

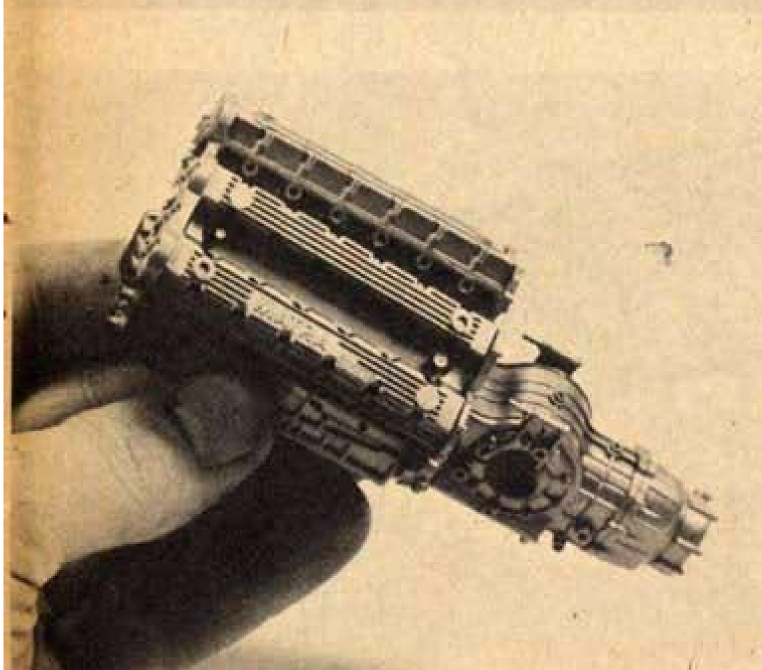


The French blue plastic is a nice color straight from the kit, but a great deal can be added to the appearance by spraying the blue parts with Pactra's Candy Sapphire Blue.

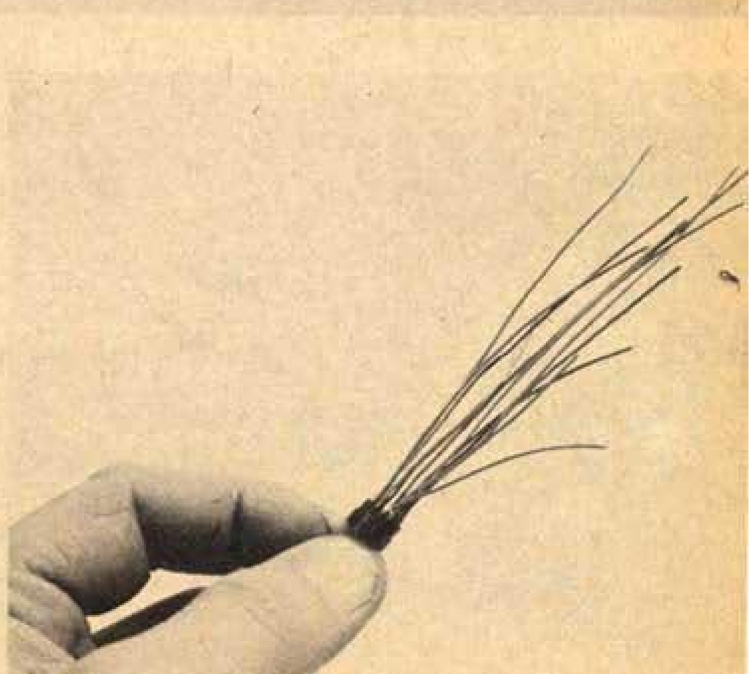


The Candy Sapphire blue adds a depth to the plastic color without detracting from the basic true color. Only about two coats are needed.





While the candy painted parts are allowed to dry for at least two days, the modeler can start to work on the engine . . . which is fantastic!

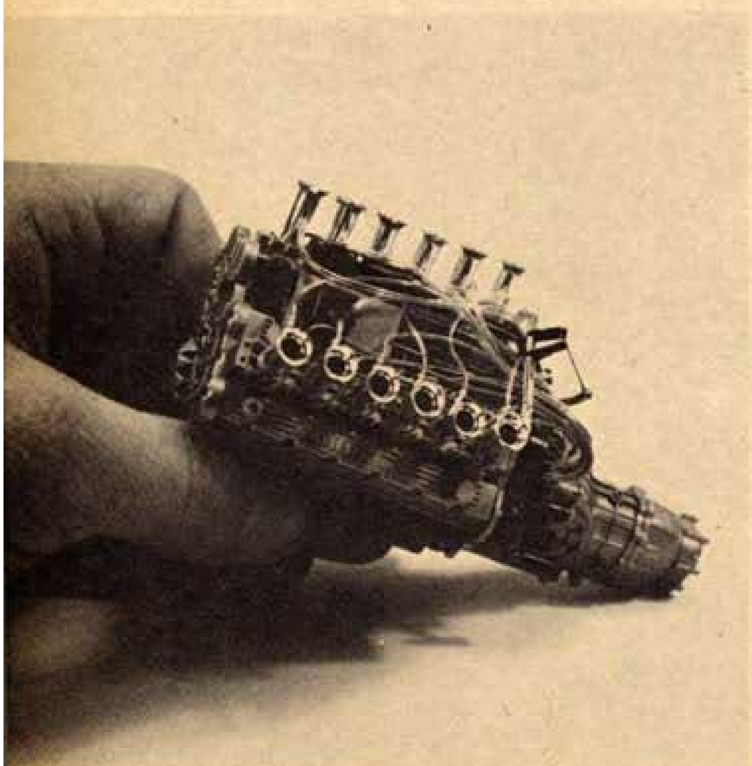


All of the parts, such as this distributor and wiring, are included in the kit and a very careful study is required by the instructions.

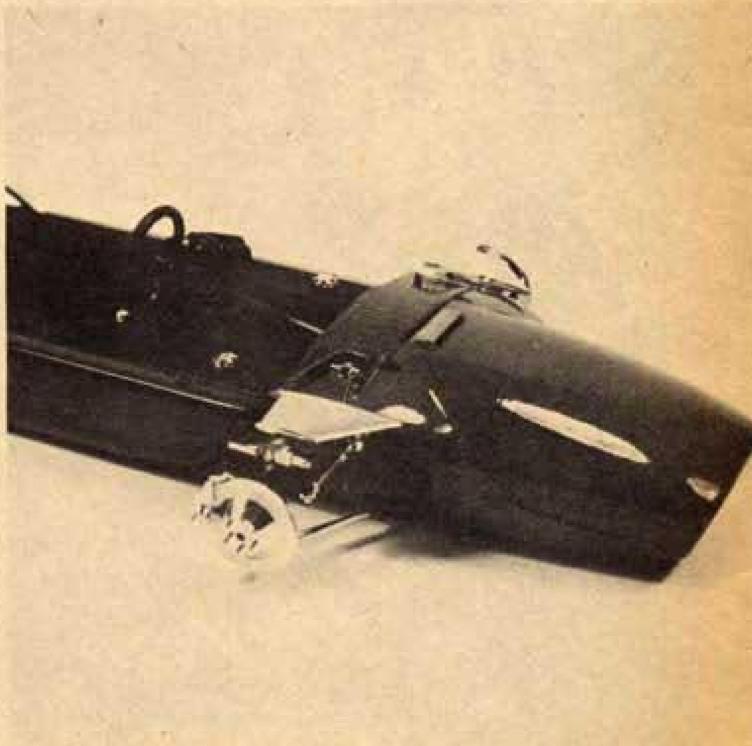
a loan of nearly a million dollars, the company had its backing and with their experienced drivers and engineering know-how, it becomes quite apparent why Matra moved into the top ranking segment of GP racing. The Grand Prix car, the M.S. 11, first appeared at Monaco in 1968. Little success came from this engagement. In the balance of the season, Matra had its share of problems. One of the biggest headaches was the enormous fuel consumption. Extra fuel tanks had to be added on the side of the main hull to accomodate the thirsty engine. The engine proved to be too heavy for its power output, among other things.

In the following season, things did change for the better. In the first race, however, Beltoise, although not injured, crashed his mount at Monaco. In the Dutch GP, the Matra, with Beltoise driving, finished second behind Jackie Stewart in a Matra Cosworth, the firm's first real Formula victory. From that point, Matra's MS11 seemed to have more than its share of grief and the company finally shelved the car. However, to quote John Wood's description in the flyer that comes with the Tamiya kit, "The MS11 was France's first entry into Formula One racing since the abortive transverse engined Bugatti which appeared in 1957. As the car which was to bring back the glory of the 1920s to French motor racing, it failed, but as the first step to the re-establishment of this glory by the Matra Concern the MS11 probably succeeded. Indeed in about twenty year's time the car will no doubt be looked back on as the first of the "new wave" of French Grand Prix cars which achieved some, if not all, of the country's former greatness in what is the world's foremost sport." One can see the significant meaning of the Matra's place in GP racing. With the Tamiya kit, the modeler can reproduce this fine car in scale . . . 1/12, a true champion in the "Parade of Giants."

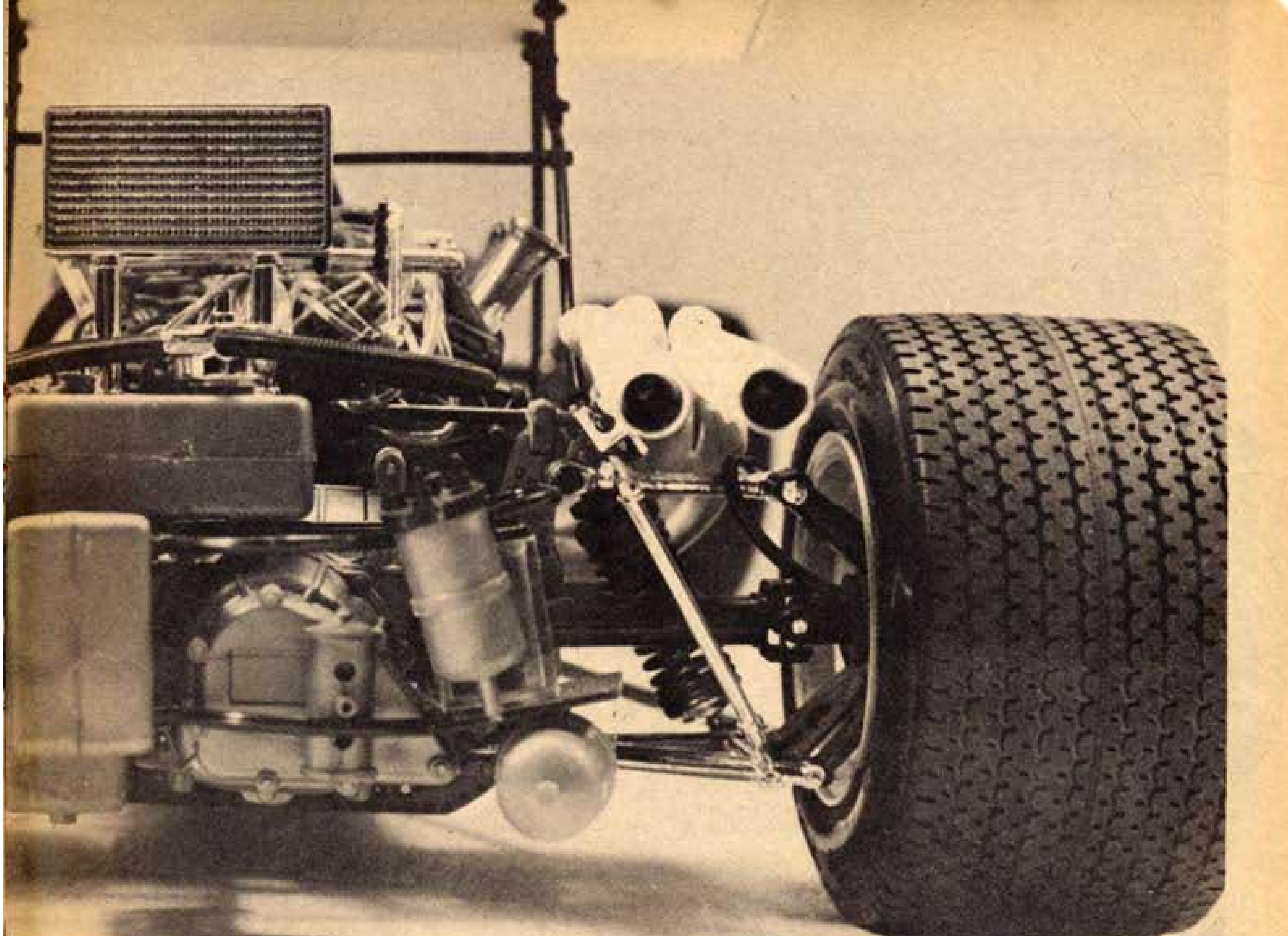


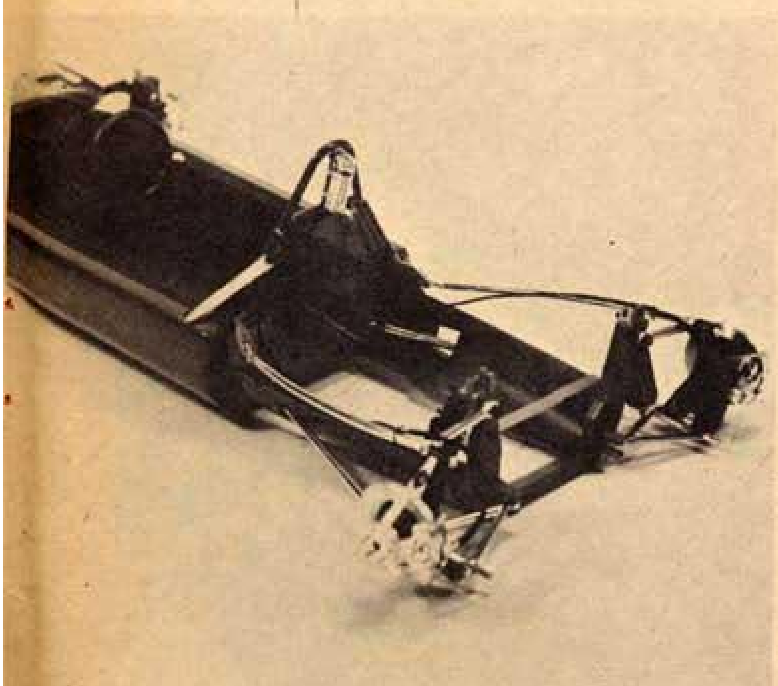


This is it, in semi-completed form, the fantastically detailed Matra engine.

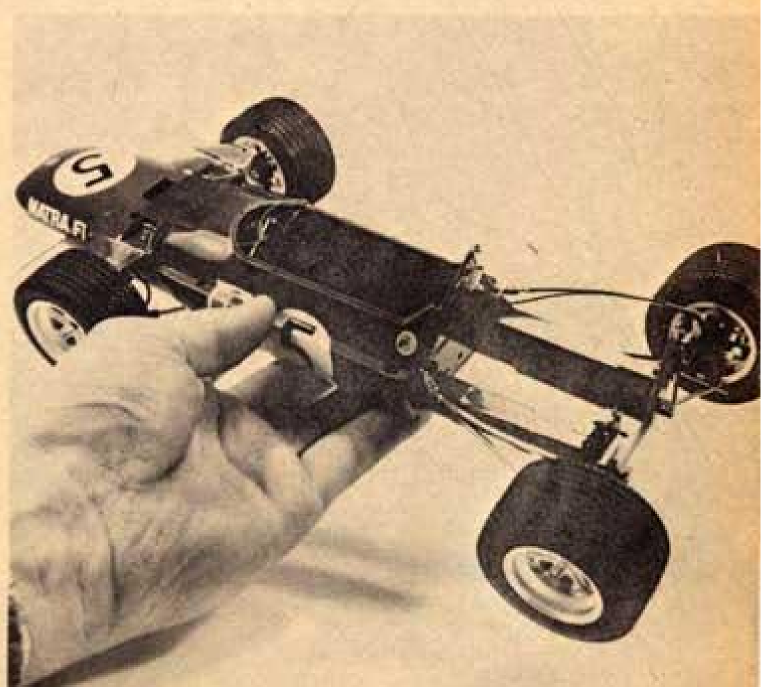


Assuming that the body is thoroughly dry, the front suspension, which is also very well detailed, may be installed according to instructions.

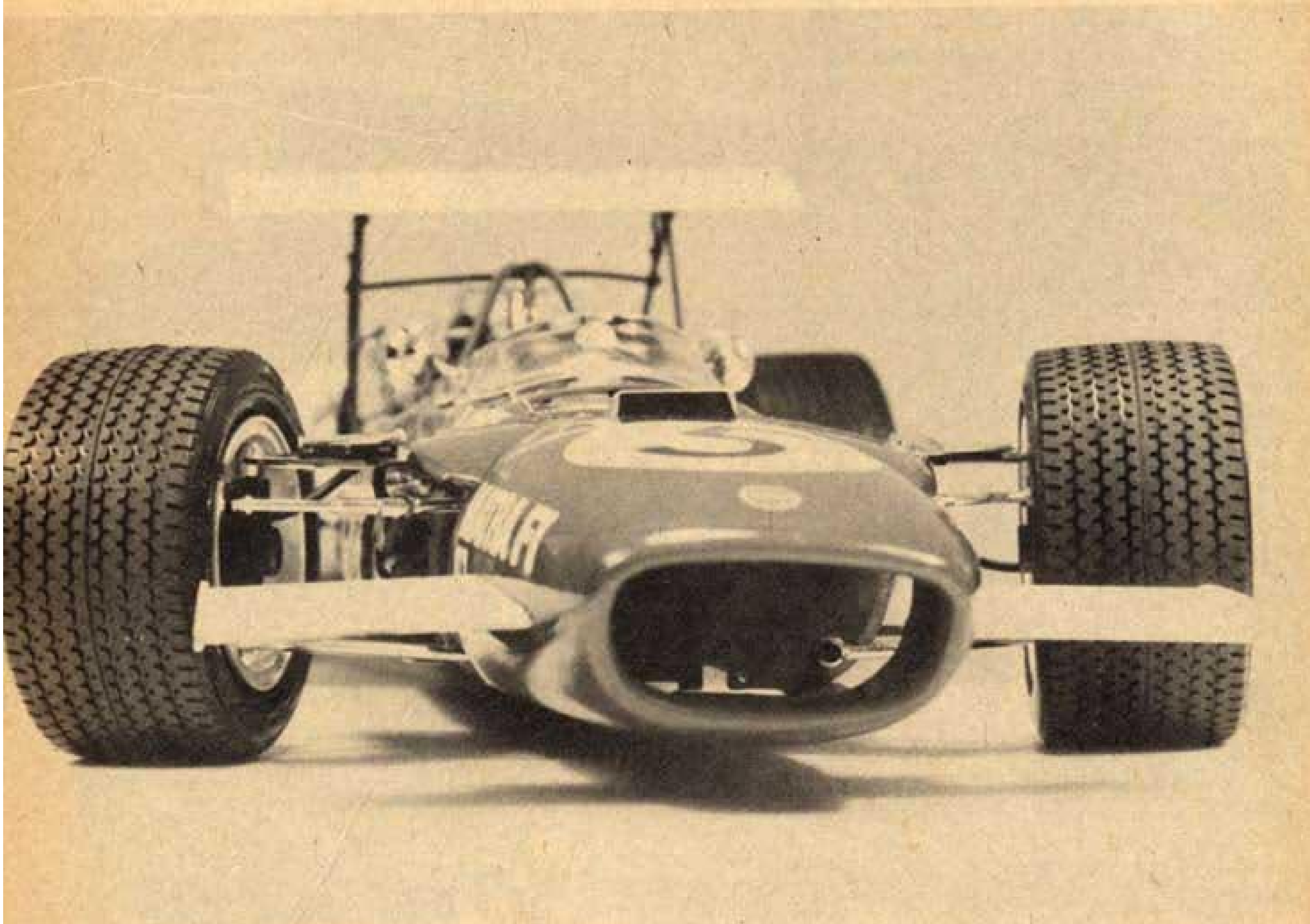


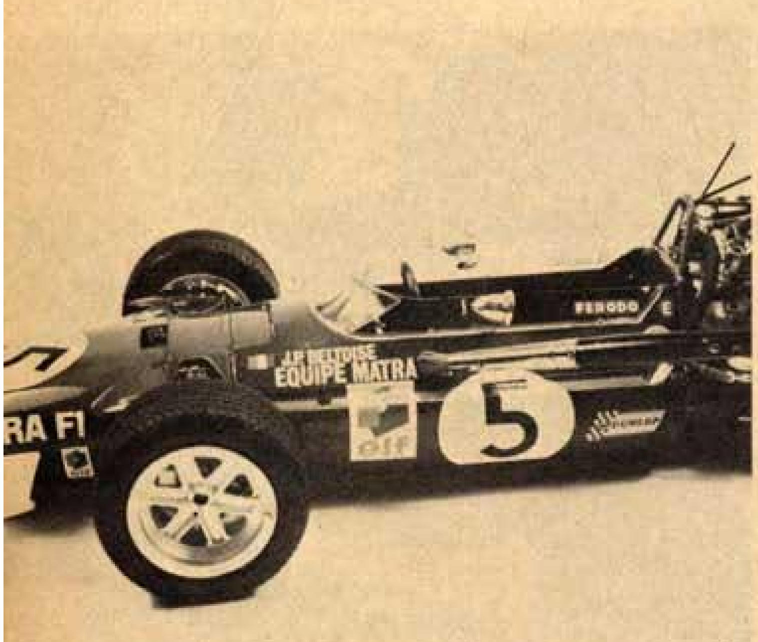


Although not shown here in our study of the rear suspension, I would recommend the modeler wear A PAIR OF SURGEONS GLOVES, when working with candy painted and chrome parts. It does save the parts from unsightly, oily fingerprints!

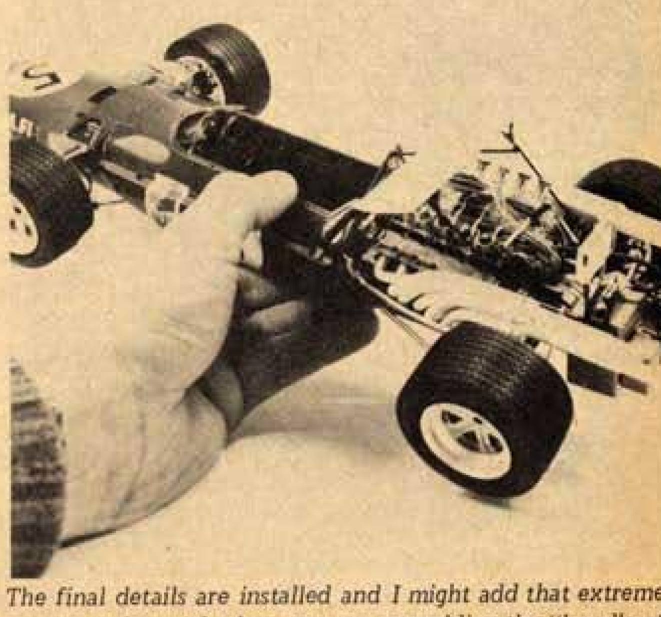


After assembly of the complicated rear suspension unit, the beautiful Matra wheels and tires are installed, very carefully. These parts of the car are quite touchy and hap-hazard assembly will bring heart-breaking results.





Here is a tip for decal application. Get a high quality No. 9 paint brush (preferably sable) and cut the brushes back to about 1/4th inch long. This makes a soft, stiff brush which is great for working a decal in and around compound curves.



The final details are installed and I might add that extreme care must be used when you are assembling the "bundle of snakes exhaust." It's a tough car but well worth the effort.

Want to win a full-size dream car? Of course you do, especially when you find out that the dream car is none other than the famous Monogram "Predicta" show car, designed by Darryl Starbird! This car has toured the show circuits from coast to coast, driven an actual 10,000 road miles to prove that it was more than a "show" car! And it has been featured in no less than nine national magazines!

But time's running short, if you want a crack at this car. *Model Car Science* has trumpeted the news of this contest in its last two issues, but this is your *very last chance*; in fact, you only have until midnight, July 22, 1970 to get your entry postmarked.

How can you win? Simple as pie. You'll have to spend the price of a kit or two, but that's all the bread you'll have to lay out. The idea behind the contest is to bring out every last ounce of ingenuity you possess in constructing your very own "dream dragster." You must use a Monogram kit, of course (now it really wouldn't be "cricket" to use somebody else's, would it!). Okay, take any Monogram kit you want and start revamping it. You can make a coupe, truck, pick-up or what-have-you (see the accompanying rules). Just use your imagination and every ounce of skill.

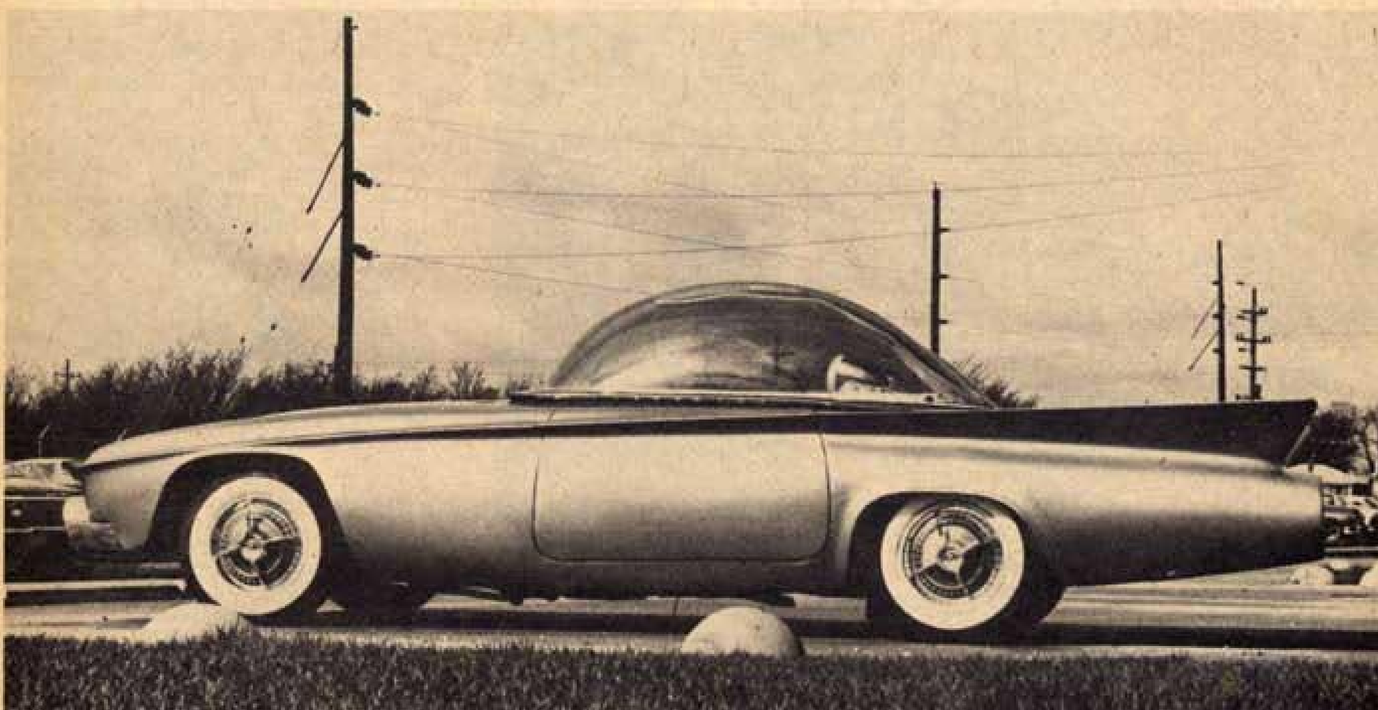
Remember, we do not want to receive the actual model from you – just send us good black and white photos. The rules cover this, too, so read them carefully.

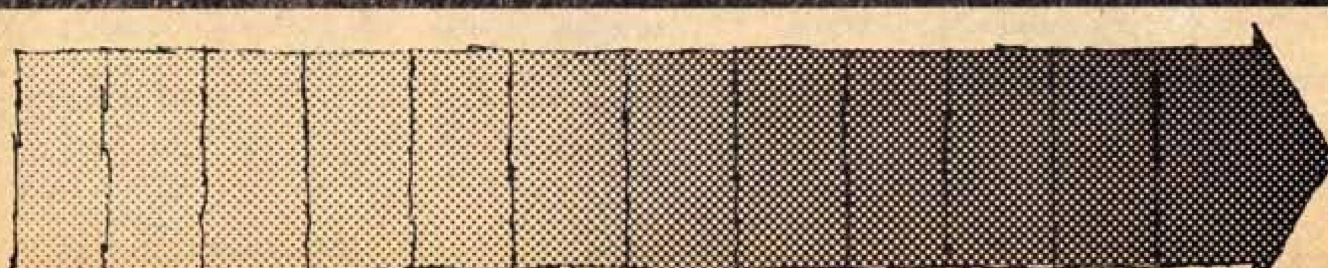
The contest will be judged by Raymond Hoy, Editor, and Brick Price, Associate Editor, plus members from the Monogram staff.

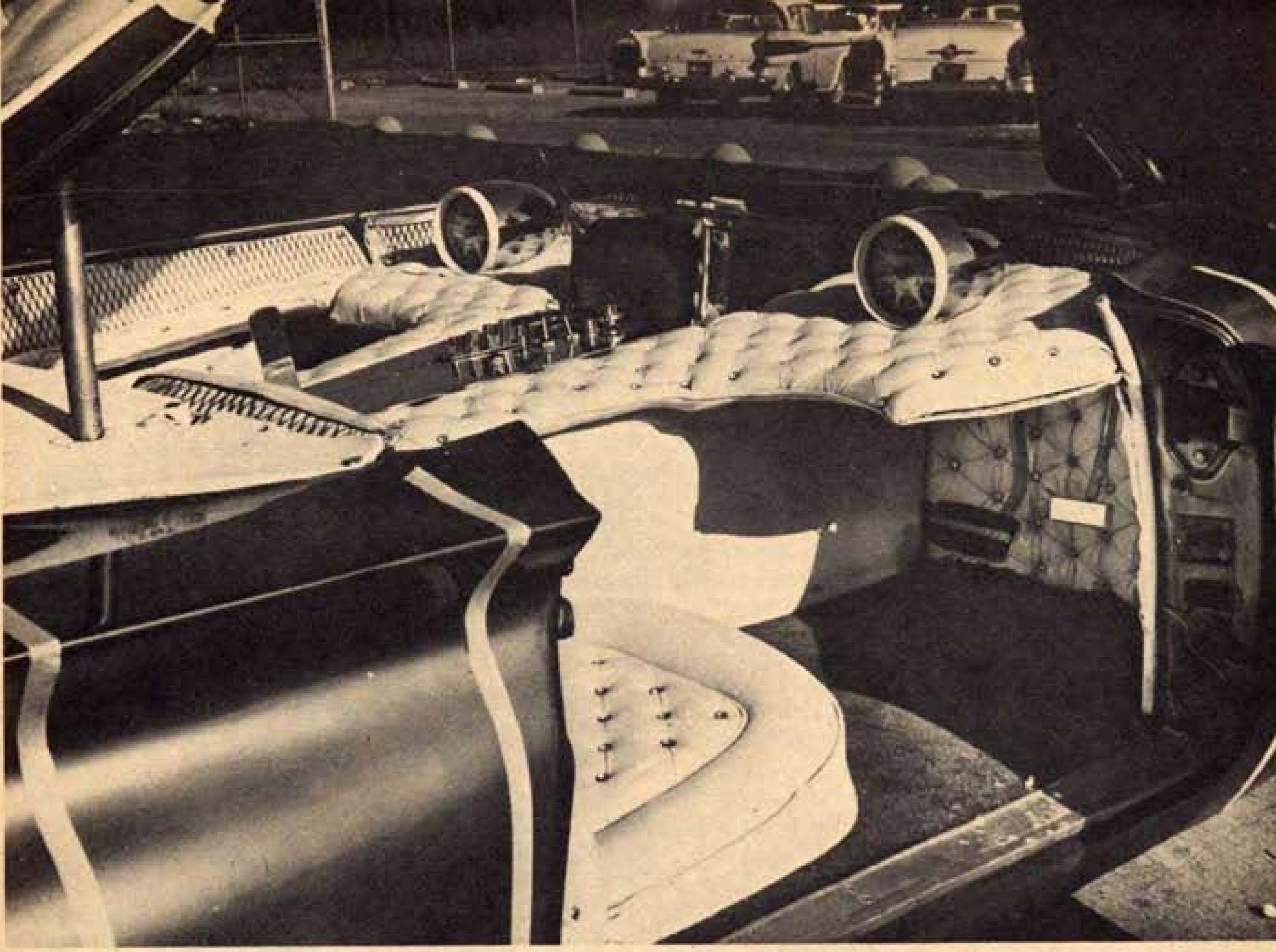
Good luck – *and get going!*

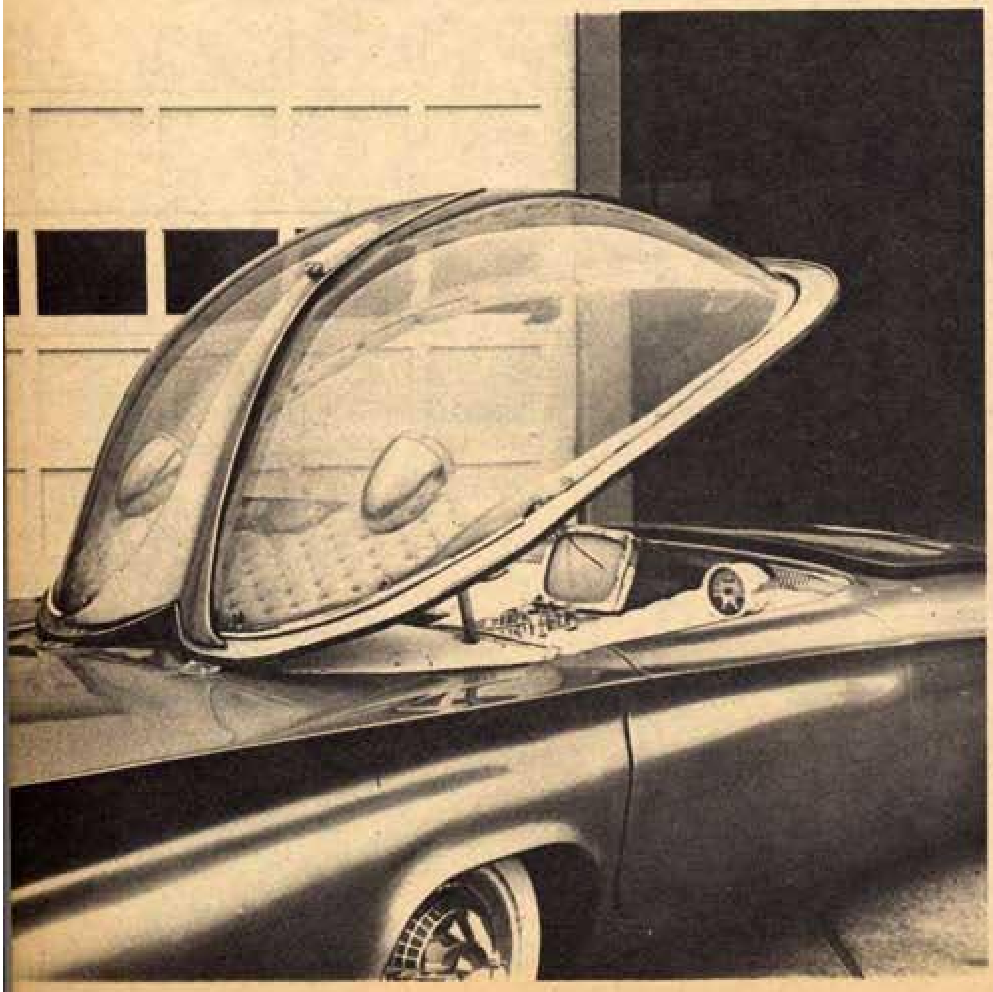
Your entry must be mailed no later than midnight, July 22, 1970! Better hurry!

LAST CHANCE TO WIN A FULL-SIZE "DREAM" CAR!









The Monogram "Predicta" is one of the original bubble topped, experimental type, prize-winning show cars. It was designed and built by Darryl Starbird who also made many other outstanding show cars. It has won numerous car show awards from coast to coast, including the famous Oakland Roadster Show.

The Predicta was the first in the custom field to have such features as "unistick" steering, an electrically operated full lucite bubble top and individual cockpits with chest high safety padded dash. The Predicta features an all metal body which was basically an early type Thunderbird but has been so extensively restyled that only the hood resembles the original car.

The work took over 2000 man hours to complete. Power is supplied by a reworked 392 cubic inch, fuel-injected '57 Chrysler Hemi engine.

The Predicta has traveled over 50,000 miles while being shown. The car was actually road driven over 10,000 miles and was proven to be more than a "show" car. The Predicta has been featured in at least nine national magazines.

MONOGRAM – MODEL CAR SCIENCE DREAM DRAGSTER CONTEST

1ST PLACE:

Monogram's full-size "dream car" – the fabulous Predicta!

2ND PLACE:

$75 cash and one-year subscription to *Model Car Science* magazine.

3RD PLACE:

$50 cash and one-year subscription to *Model Car Science* magazine.

4TH–25TH PLACE:

One-year subscription to *Model Car Science* magazine.

BEST PHOTO AWARD

$25 cash and a one-year subscription to *Model Car Science* magazine. While you may not have the winning model, a special award of $25 will go to the entrant who submits the best photo in the contest

BEST OPERATING FEATURE AWARD:

$25 cash and a one-year subscription to *Model Car Science* magazine. A special award of $25 will go to the entrant who submits the best operating feature of a dragster in the contest.

CONTEST RULES

1. Anyone residing in the United States and U.S. Possessions may enter except the employees of Monogram Models Inc. and *Model Car Science* Magazine and their families. *Model Car Science* writers are not eligible to enter.

2. Your entry must be built using parts from any Monogram car kits plus any scratch-built parts you may wish to make. Customize the model into your own version of the Dream Dragster. Make it as "way-out" as you wish, using any body style such as a rail job, coupe, truck, pick-up, etc. Although not necessary, parts of the T'rantula may make a good base from which to start.

3. *Do not send us the model.* Mail two black-and-white photos and a 50-word description of how you built it, and your name and address to:
MONOGRAM-MODEL CAR SCIENCE
Dream Dragster CONTEST 131 S. Barrington Place Los Angeles, California 90049

4. You may submit as many entries as you wish, but only your best entry will be selected for an award. Submit each entry in a separate mailing.

5. Upon entering, you agree to let Monogram Models Inc. and *Model Car Science* use photos of your car for editorial, advertising and public relations purposes. Photos and descriptions become the property of Monogram Models Inc. and *Model Car Science* Magazine, and none can be returned.

6. Entries will be judged on workmanship, originality and design.

7. This contest is void in states where taxed or prohibited by law.

ALL ENTRIES MUST BE MAILED ON OR BEFORE MIDNIGHT, JULY 22, 1970.

Here's my wild entry for the Monogram-*Model Car Science* Dream Dragster Contest. Enclosed are two black-and-white photos and a 50-word description of my model. I understand that the photos and descriptions I submit become the property of Monogram Models, Inc., and *Model Car Science* magazine and none can be returned. I agree to abide by all the rules.

OFFICIAL ENTRY BLANK

Name ______________________________

Street and Number ______________________________

City ____________ State ________ Zip ________

Age ________ Phone Number ______________





MOTO-CROSS MADNESS

Revell's 1/8 scale Yamaha was designed for this wild scene!

By Brick Price

Motorcyclists are a tribe of "individualists." All of the wars in the world are merely trivial disagreements compared to the verbal encounters found in groups of two or more cyclists discussing the merits of "their" brand. Likewise the atmosphere surrounding the single versus "multi" and two-stroke versus four-stroke cultists is electric. The latter group of two-stroke buffs were in the minority until the last decade when the Japanese motorcycle industry started leaving the competition in a cloud of Castrol-impregnated grey smoke.

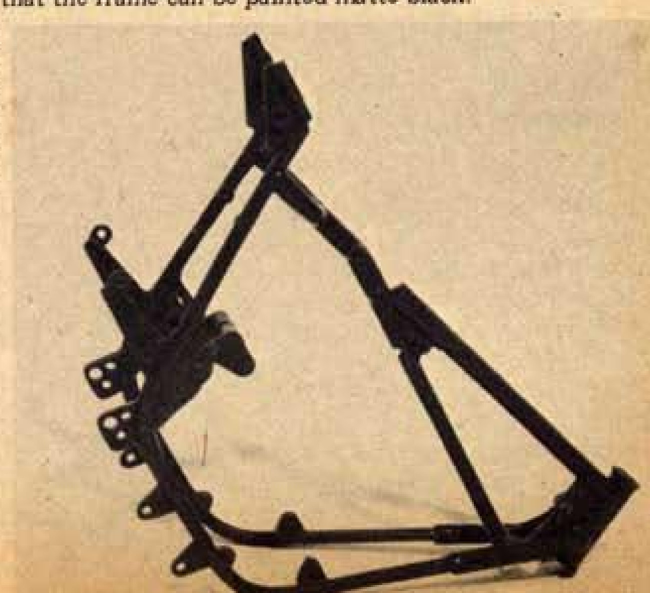
Yamaha is one of the world's largest manufactúrers of two-stroke racing bikes and special purpose bikes. Their moto-cross bikes are fantastic in box stock trim, but, as always, the lights are removed, mufflers replaced with expansion chambers and knobbier tires added. One day the mild-mannered, once dual-purpose bike emerges as a hairy chested bully ready to kick sand in the opposition's face.

Popular Cycling is doing the very same thing with their Yamaha and we can follow suit using Revell's fabulous Yamaha Scrambler 350. The Revell Yamaha can be modified with parts from Revell's Triumph Custom Show Bike and Honda Scrambler. You can omit the Honda parts, but they help to make it a simpler conversion.



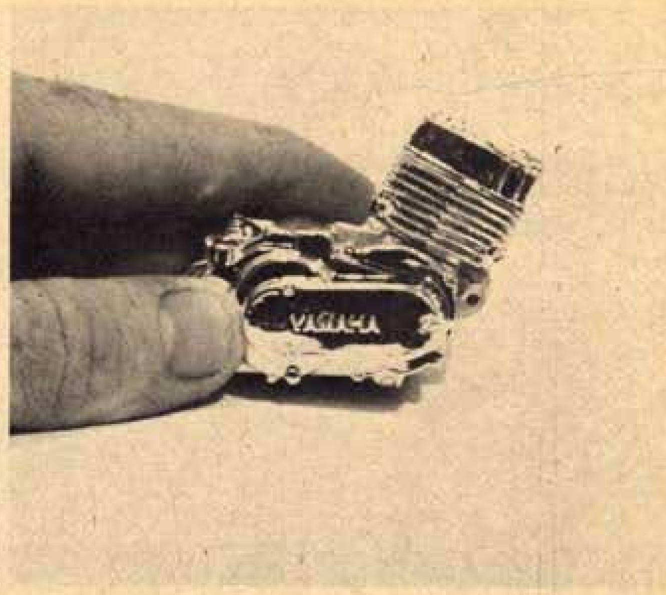
The Yamaha Scrambler 350 by Revell is a good replica of the stock 350, but it's not really suited for racing nor does it look like it.

Assemble the frame and put all of the pieces in place so that the frame can be painted matte black.

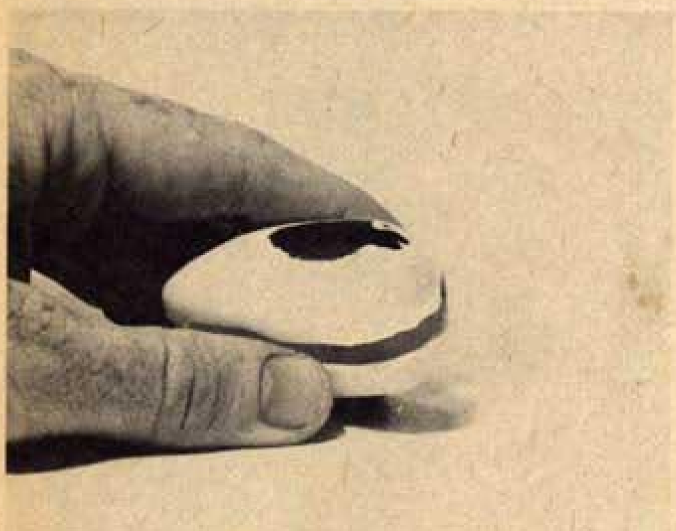




The spindle from the Revell Triumph Custom kit can be modified with a file to fit in the Yamaha fork tube.



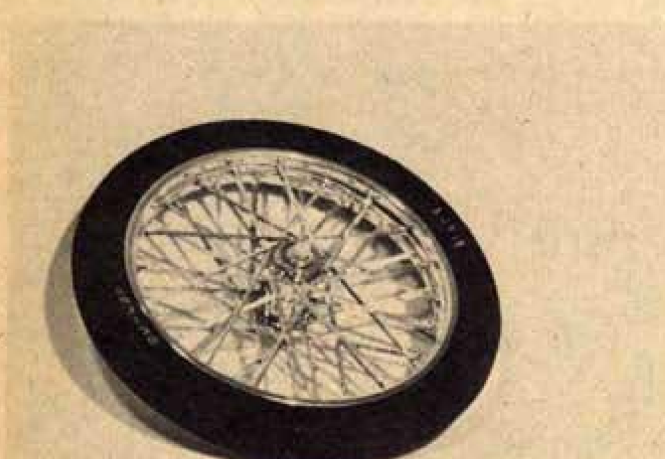
Paint the crankcases with silver undercoat to resemble aluminum. Assemble the engine.



The Revell Custom Triumph yielded this nice looking peanut tank. Fill the recesses with putty and remove the mounting flanges.



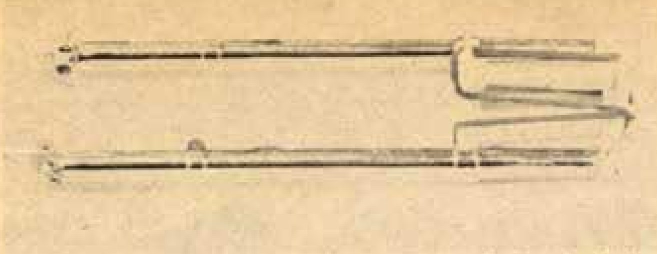
The Honda front wheel, rear tire, and rear backing plate will fit together like they were made for each other.



A brakeless front wheel like those used on flat-trackers could be made from two Triumph wheel halves glued back-to-back.



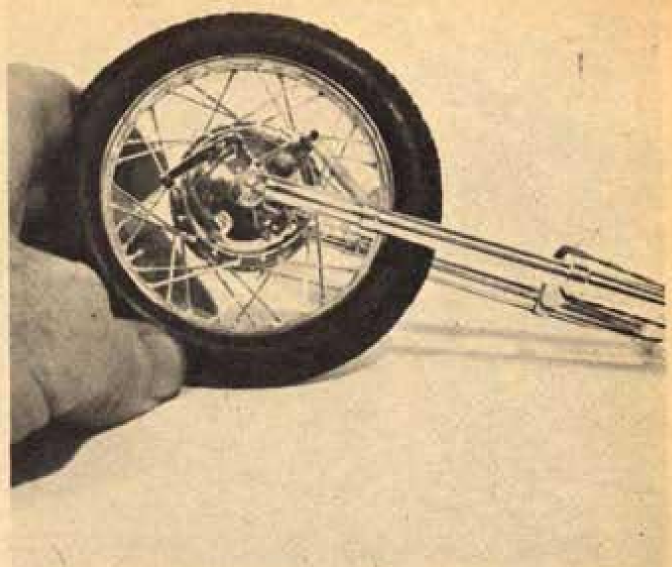
Cut the retaining arm from the Honda front backing plate and glue it in place as shown. The linkage from the Honda front wheel can be used, as is, to locate the brake line properly.



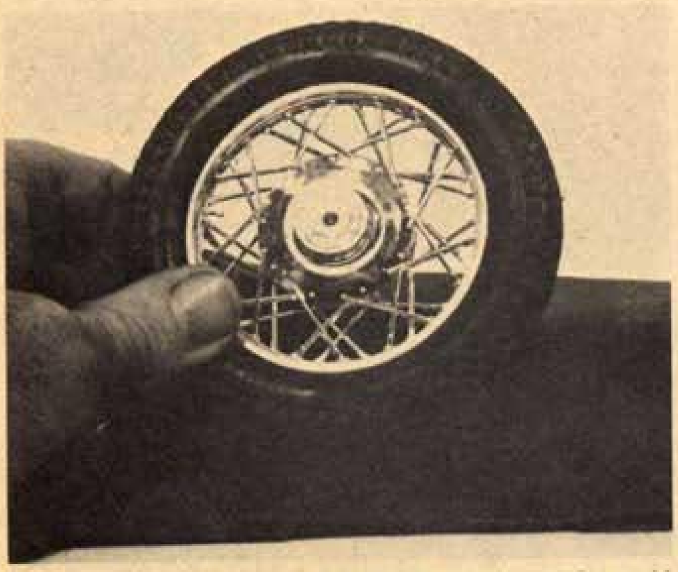
Completely assemble the Triumph front forks, including the top and bottom yokes.



Our new front wheel will be off-center slightly, as it is. A simple remedy is to fabricate a spacer block such as this, using the Honda speedometer drive and Yamaha steering damper.



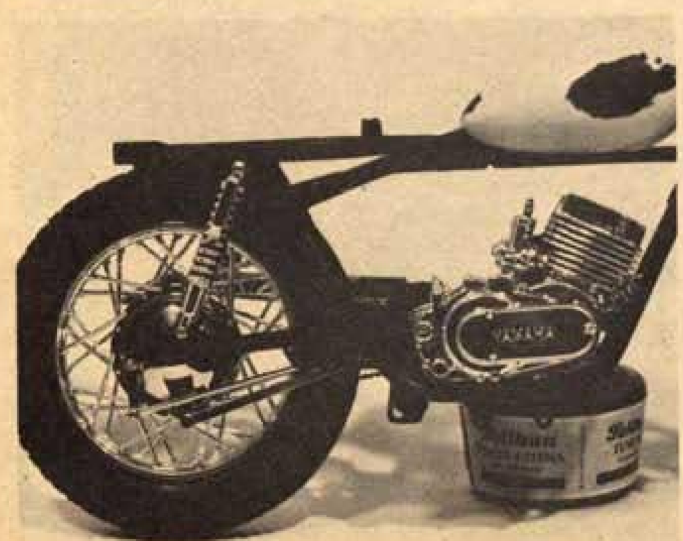
H.O. scale plastic nuts and bolts are very useful in detailing the Revell bikes. We used some of these on the final assembly of the forks.



Sand the running surface of each tire to remove the mold lines and to give them a "used" look.



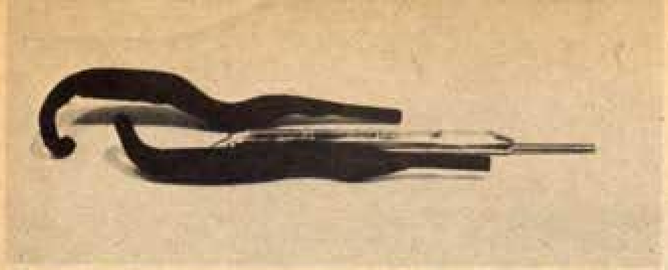
The fins on the engine and the springs on the rear shocks can be emphasized by flowing India ink into the crevices.



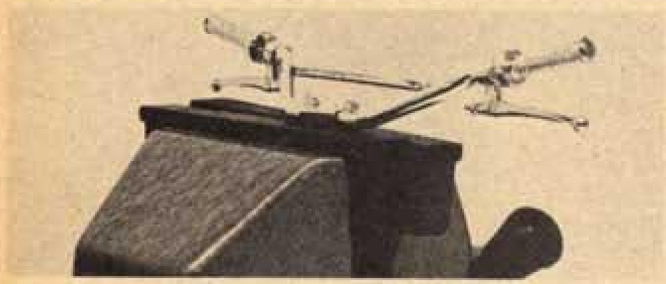
Install the front and rear end assemblies. Place the engine into the frame from the right side.



Paint the tank and Triumph rear fender Competition Yellow and position them on the bike without glue. The front fender is the stock Yamaha piece, but it has been mounted high on the forks for clearance.



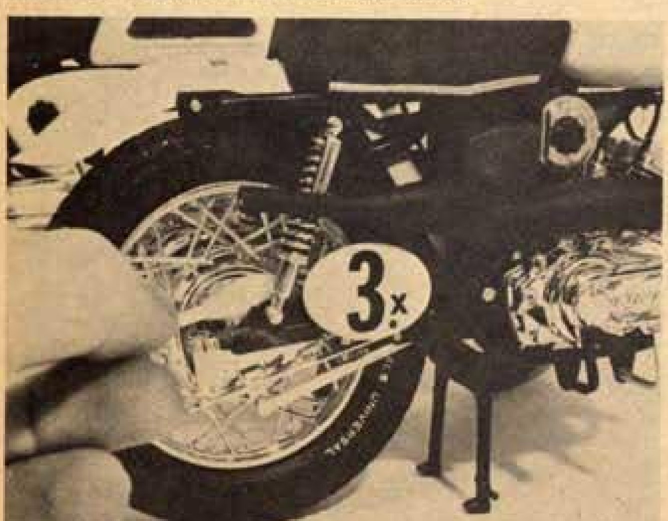
A set of nice-looking expansion chambers can be made by bending the stock pipes to shape over a candle and painting them flat black.



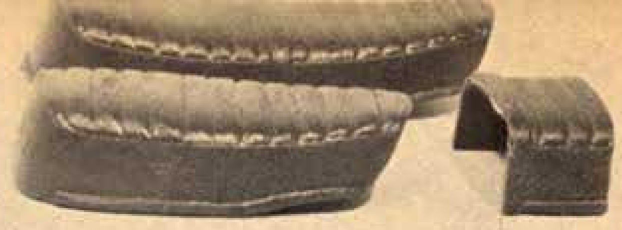
The handlebars from Revell's Honda Scrambler kit include a reinforcing crossbar, and they're the right shape, but they have to be narrowed 1/8".



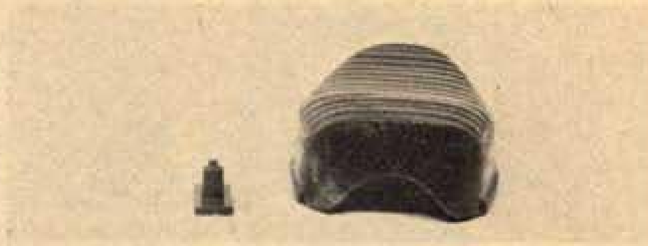
Competition number plates can be made from sheet plastic with rub-on numbers and H.O. scale bolts.



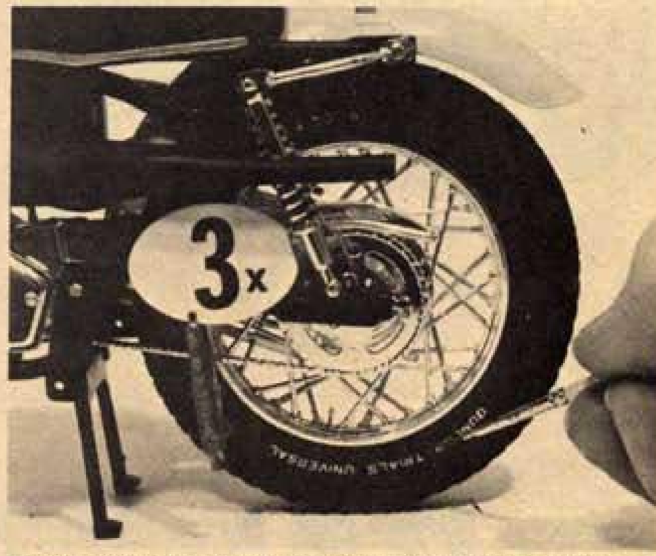
By now your model should have more fingerprints than the F.B.I.! Don't dispair, a Q-Tip swab dipped in Denatured Alcohol will remove most of the evidence.



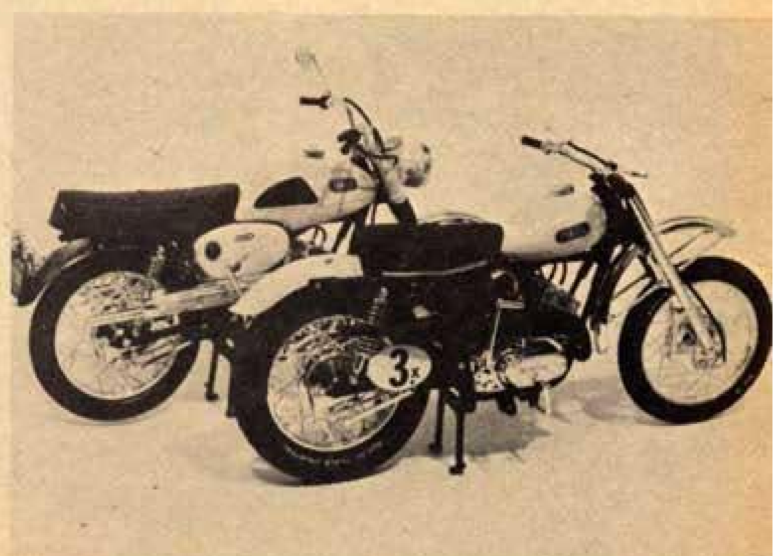
The stock Yamaha seat can be shortened approximately 1/2" by removing four pleats from the middle of the seat and gluing the halves together.



The front seat support (Number 85) should be lowered 3/32". File a notch in the seat back to fit around the Triumph fender.



Revell tires are always super-detailed and deserve some emphasis. Allow flat white enamel to dry on the brush until it's tacky and run it across the top of the letters.



Although they're the same basic motorcycle and they both run in the dirt, the differences are like night and day.



By
Robert
Schleicher

BARRIS' MINI-T

MPC goes to the rescue of stranded off-road racers

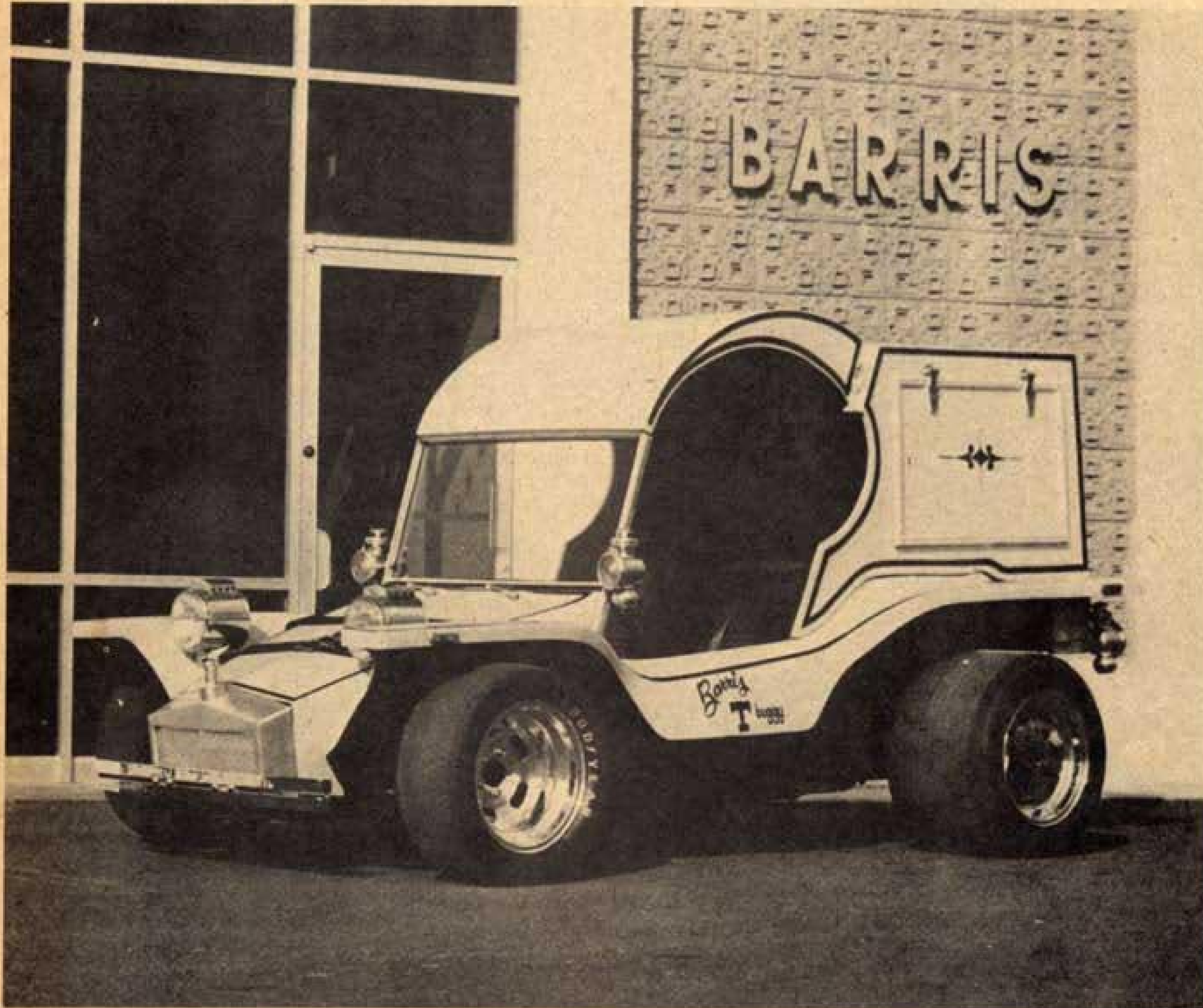
Of course off-road racing is serious! Whether the vehicles have two wheels or four, the danger to the drivers is at least as great as any other form of competition. An off-road pilot has to contend with the unexpected from nature as well as his vehicle and the other racers. A sudden dip in the road can pitch either car or motorcycle end over end in less time than it takes to hit the brakes (as though that would help in any way).

At least one group in Southern California, calling themselves "Rescue Three," have made some really practical use of their fun buggies and Jeeps. This enthusiastic group offers their services to off-road racing groups in the area to provide citizens-band radio connections with the more remote parts of the race course. When some of the area's races, particularly those for motorcycles, extend over fifty miles away from the pits you can see what remote can mean. Each vehicle is equipped with a two-way radio for communications with the control center in the racing pits. Information about rider injury can be instantly relayed to the pit area where a doctor and ambulance Jeep are waiting. The system can save accident victims literally hours of time



The basic body of both Barris' and MPC's "Mini T" is that of a stylish off-road roadster. Pivoted windshield is unusual.

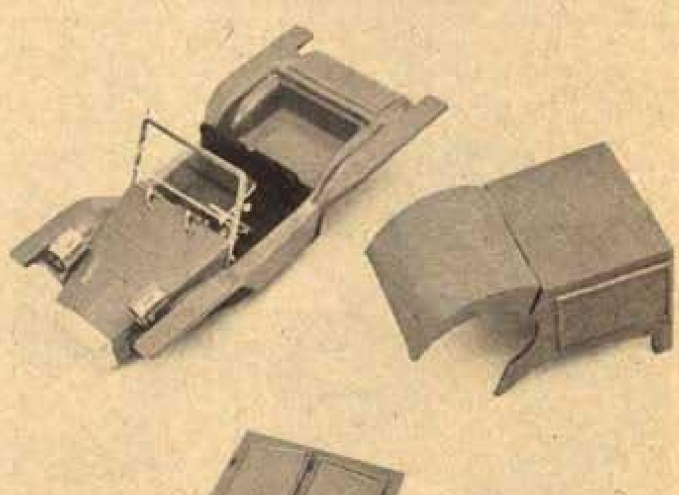
MPC's 1/25 scale kit is a precise copy of George Barris' "for sale" production bodies of his "Mini T". Real car and kit offer optional soft and hard tops.



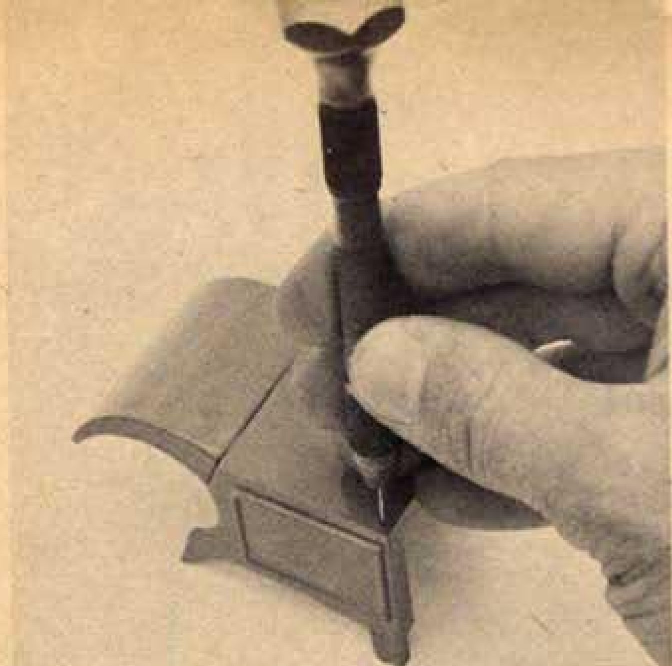
in receiving expert medical care.

For our miniature "Rescue 3" off-roader we picked the way-out MPC kit of Barris' new "Mini T" dune buggy. The removable soft and hard tops, and optional truck-like top of the real production dune buggy bodies are included in the 1/25 scale MPC kit. Barris and MPC have a unique torsion bar front suspension on their show buggy with a fancy Corvair air-cooled flat six for power. Mag wheels and wide oval tires are part of the package too.

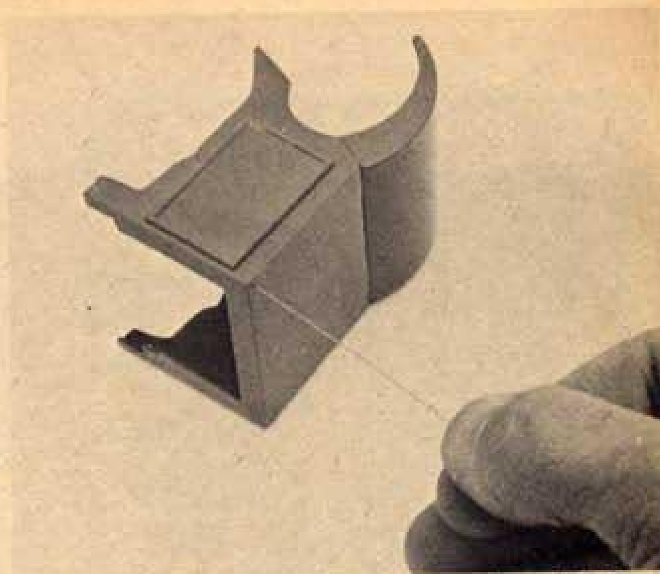
For our conversion of the MPC's Barris "Mini T" into an off-road rescue vehicle we added the super-traction tires from the new MPC "Kyote Wagon" dune buggy. These cog-like tires are dualed, back to back, for traction at the rear wheels. The kit's original wide oval rear tires are placed up front to keep that end of the vehicle on top of the sand. Only rarely do the "Rescue 3" vehicles ever actually carry an injured driver or rider back to the pits. The van-like "Mini T" would be a welcome shield from that desert sun to those that are transported by it, and it provides protection for the radio gear. A tall "whip" aerial is added to one corner of the body. Painted red, with those white dry-transfer lettered "Rescue 3" words on the side, MPC's "Mini T" is one of the most unusual off-road rods you could find on any modelers shelf.



The truck-style top was chosen for our off-road rescue vehicle. Rear doors are an option we left off of our model.



Use a pin-size No. 72 drill to punch a hole for the radio aerial (or a heated straight pin). Hole should align with inside corner.



A piece of .010" piano wire serves as the aerial. Many buggies carry such aerials merely to warn of their approach from behind hills. A flag is tied to top.



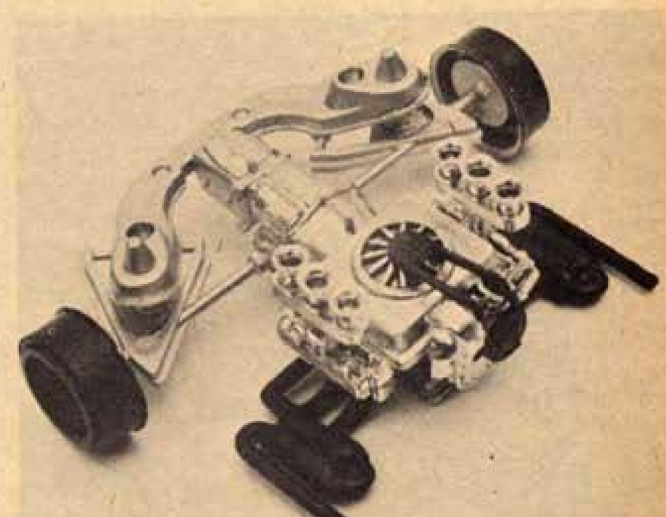
The "Rescue" letters are dry transfer letters rubbed in place. Number three is a decal from slot racing decal sheet.



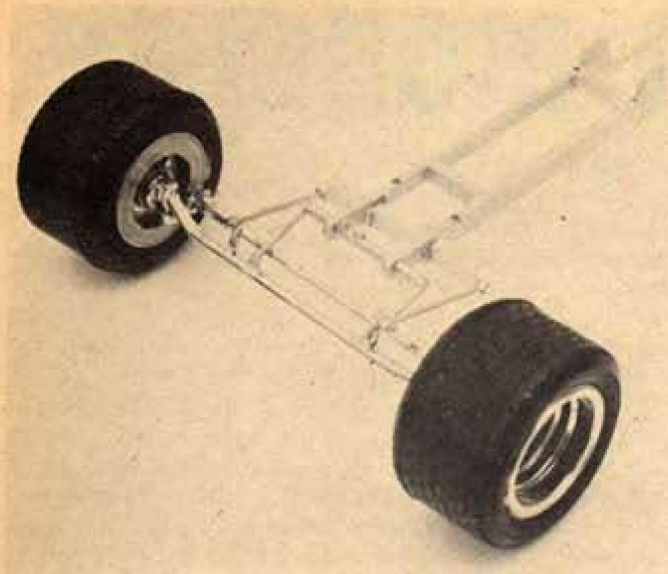
Upper body is glued in place. A scrap block of plastic, painted black with silver dots simulates radio inside.



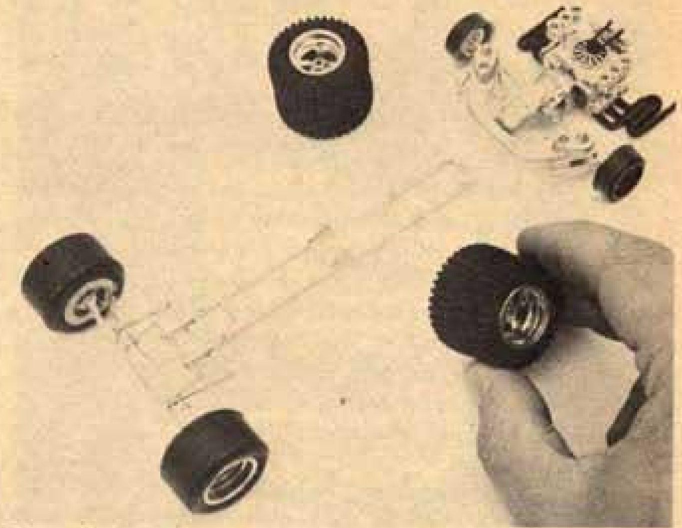
The cog-like tread tires from the new MPC "Kyote Wagon" dune buggy were glued side by side for dual rear tires.



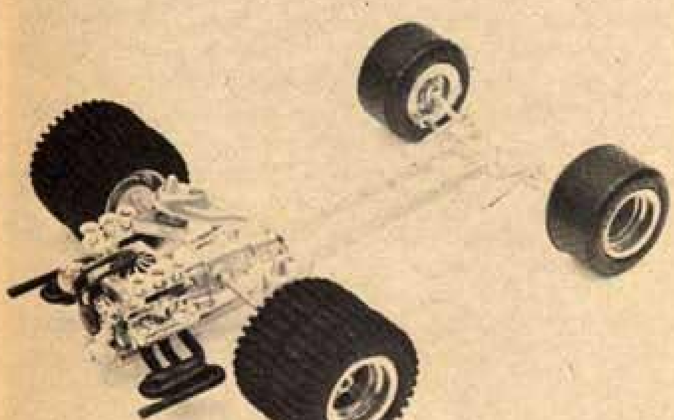
Engine in Barris "show" version of the "Mini T" is a Corvair just like that in the kit. Rear suspension is Corvair also.

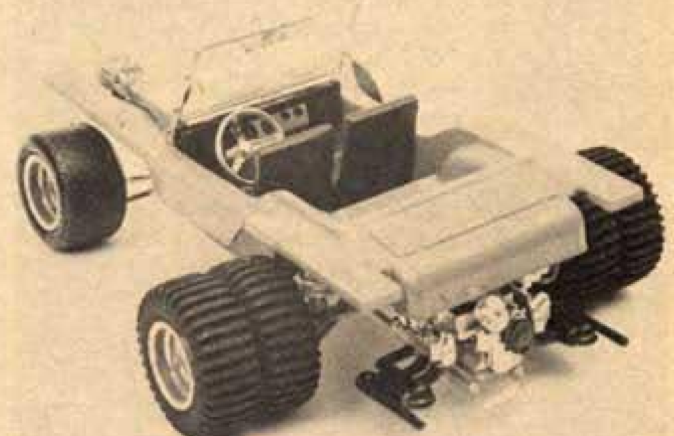


Barris, and MPC (in 1/25 scale), use a unique torsion bar and tie-rod front suspension on the "Mini T" prototype.

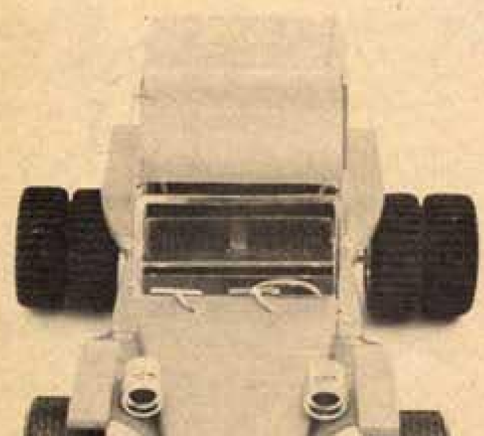


Rear wheels from the MPC "Kyote Wagon" and their dual tires glue to rear. The "Mini T" rear tires go on the front axle.





The top can be left removable on your model, just like it can be on the full-size "Mini T" dune buggy body kits.





Barris has captured a rod-style version of the Model A Ford sedan delivery trucks in this version of his "Mini T" body. "Rescue 3" is a real rescue team in Southern California.

BE A MASTER MODELER

Here's how, using readily-available Monogram goodies

Originally we had planned on building a typical car this month to show yet another possibility for Monogram's wild new "Dream Dragster" contest, but the combinations are virtually limitless! Instead, we've included some sketches of a few variations and we'll describe a few of the simpler part swapping arrangements.

The task of creating a wild new car from any of Monogram's kits is easier thanks to their attention to detail, true 1/24 scale and consistent design on construction techniques.

The Monogram early stock Ford kits are my favorites for converting into a "Dream Dragster" because there is so much that can be done using parts from late model kits or interchanging stock parts. The Li'l Coffin was based on a '32 Ford sedan and will fit neatly on the 1930 coupe, Phaeton or wagon chassis. The grill shell and hood, as well as the interior, will fit the custom body with some modification to create a different and current show car.

The 1930 five-window coupe can be chopped with little effort. The entire body and fenders can be glued to the Boss-A-Bone chassis without any modifications to give you a wild looking car with a hot Olds engine, mag wheels and big tires.

The same coupe body will fit the Woody Wagon chassis with its six carb 327 Chevy engine, chrome and mag wheels. Flat head fans will be happy to note that the full-house V-8 found in the Pie Wagon kit will also fit the coupe's chassis.

Vee Dub freaks can even build a V-rod with the custom V.W. engine and trans-axle from the Futurista mounted in the Swee'T'ee. The Furista, bless its chrome-plated heart, is a good basis for a super-slippery three-wheeled dragster. Cut the body, remove the equivalent of one seat's width from the middle, and re-join the halves. Repeat the process with the bubble top, and at the same time remove 1/4" from its height. Cut out the rear fender wells to clear a pair of T'rantula mags and Goodyear slicks and you're in business!

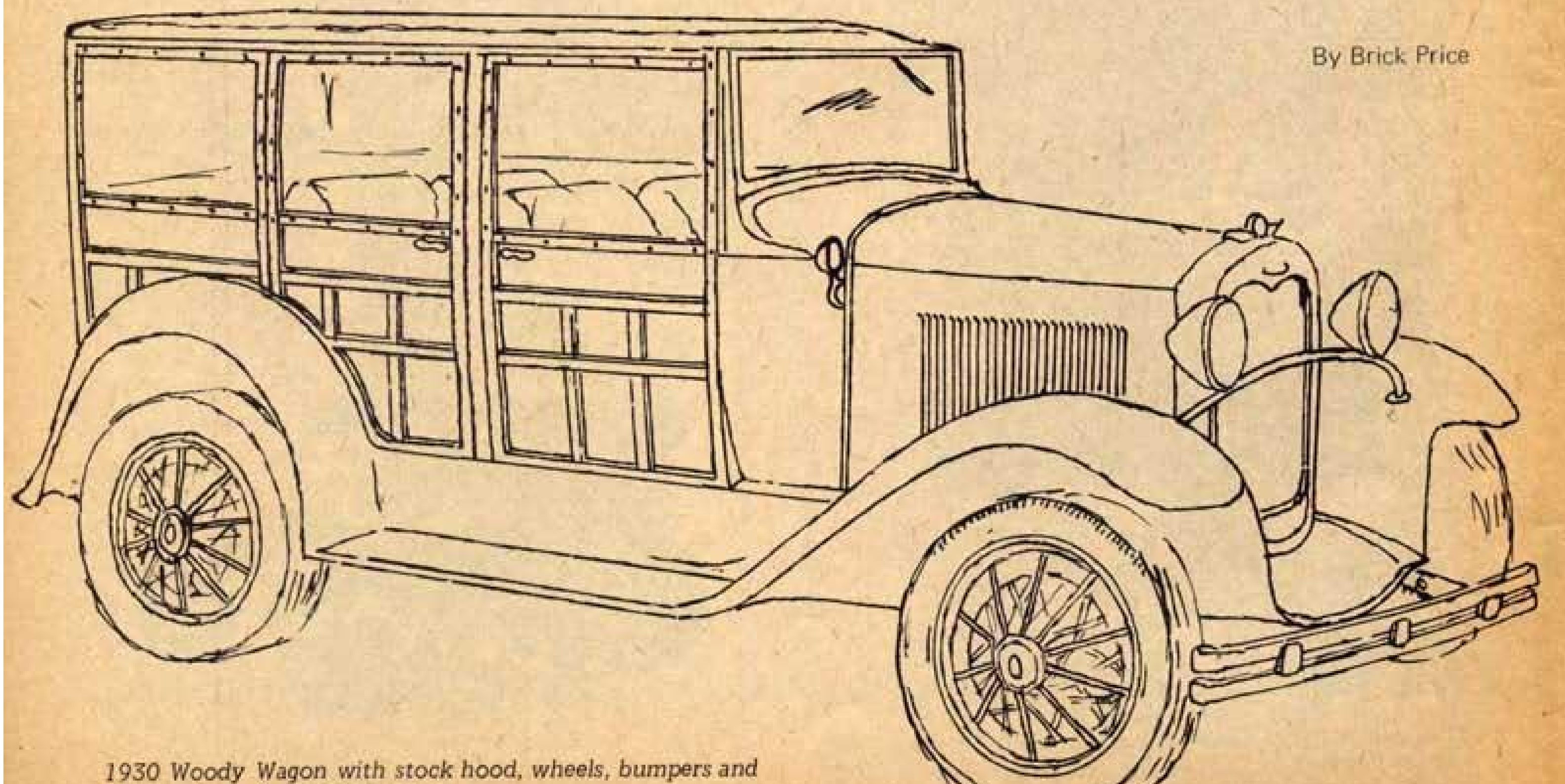
The '40 Ford pick-up is another wolf in sheep's clothing that can be transformed with a deft hand, a razor saw and body putty. Chop the top at least 1/4" and glue the hood to the fenders. Cut the fenders and hood from the cab and fabricate a hinge to allow the entire front end to open up ala hungry clam style. Shorten the pick-up bed just forward of the rear wheels, add some mags, slicks and the engine from the Son of Ford, and you're ready to hit the gasser trail.

Even a car as far out as the Red Baron can fall prey to the customizer's axe! Discard the chrome dome, radiator, and body, but retain the interior. In their place add the turtle deck Swee'T'ee body, radiator and tall 'T' top. The result is a wild looking 'T' with a Mercedes-Benz aircraft engine and custom mag wheels. Achtung!

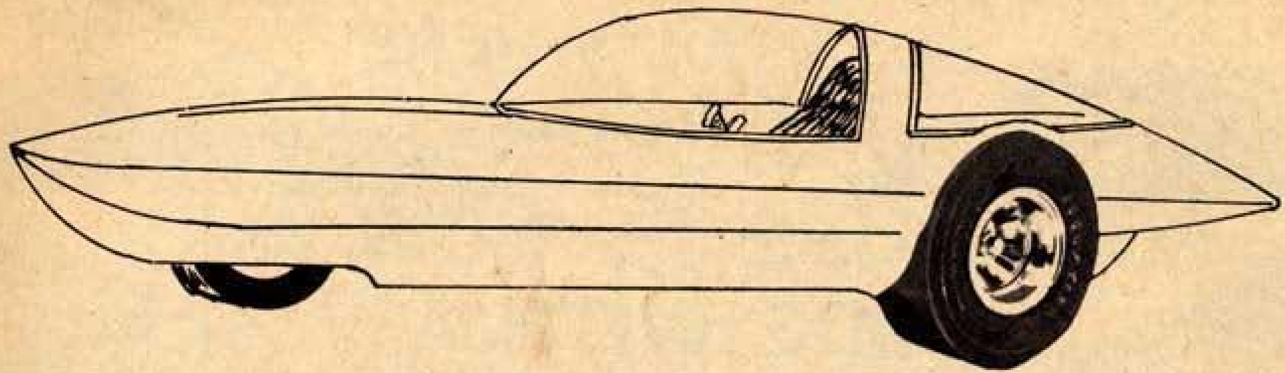
One of the all-time favorites of drag racing is the 1955 Chevy hardtop. Little can be done to this one since it already sports a blown 396 and necessary innards for competition. The car does look entirely different, though, if the entire front end is cut to pivot forward and all of the chrome trim removed.

"And the beat goes on," and on, and on. Let your imagination run rampant. The parts are all there; all that's required to win the contest is your imagination.

By Brick Price



1930 Woody Wagon with stock hood, wheels, bumpers and interior from the 1930 Phaeton.



The Futurista was modified for drag racing by narrowing the entire body and bubble top. The wheels are Pie Wagon fugitives.

CONTINUED

The following partial listing of Monogram kits and their contents should be useful:

PC72 – Stock 1934 Ford three-window Coupe or Cabriolet with top up or down. Stock 221 C.I. flathead V-8.

PC89 – 1958 Thunderbird-stock hardtop-stock convertible-bubble top custom. Stock single quad 352 V-8 or custom engine with tri-power and headers. Fenton mag wheels or stock wheels. Custom grille. Landau hardtop.

PC91 – 1940 Ford pickup-stock, mild or full custom versions included. Stock flathead V-8 or chrome, finned heads and Winfield tri-power. Stock "Baldy" hubcaps and wheels and beautiful wire wheels are included.

PC95 – Predicta-bubble top custom show car by Starbird. 392 C.I. Chrysler Hemi with fuel injection, magneto and headers. Chrome wheels, custom lounge-style seats, bubble top and uni-stick steering are just a few of the items included.

PC99 – Porsche 904.

PC103 – Custom 1930 Ford station wagon. 327 C.I. Corvette engine, six Stromberg 97 carbs and Weiand drag star manifold. Chrome wheels in front with American mags and M. & H. slicks in back.

PC108 – Futurista dream car by Starbird. Bubble top. Volkswagen engine with dual carb manifold. Wheels are covered with flat hub caps.

PC116 – Stock 1930 Model A Phaeton includes stock wire wheels, full fenders and stock "L" head four-cylinder engine.

PC118 – Stock 1936 Ford Coupe or Cabriolet with top up or down. Includes stock V-8 and operating rumble seat.

PC120 – Stock 1930 Model A Ford. Model A Coupe or Cabriolet with top up or down. Includes stock "L" head four-banger and operating rumble seat.

PC141 – 1/32 Hemi Fiat. 1/32 scale mag wheels and full-blown Hemi engine included.

PC173 – Super-Modified Sportsman. Dish-type mag wheels (chrome). Schneider-prepared 327 C.I. Chevy with Hilborn injection, Hunt magneto, finned valve covers and headers. Halibrand quick-change rear-end and drive shaft are molded to engine to use as a unit.

Lil Coffin – Custom show car based on '32 Ford two-door sedan. '54 DeSoto Hemi engine with six carbs and plated valve covers. Plated American mag wheels, white wall slicks and skeleton are included.

Paddy Wagon – Show car. 'C' cab panel body with metal frame windshield and full inner paneling. Cobra 289 C.I. V-8 with dual scoop Ram Air injection, finned rocker covers, headers and finned header plugs. Wide Goodyear slicks are mounted on vertically slotted chrome wheels.

Swee'T'ee – Model T hot rod. Includes choice of turtle deck, pick-up or oval tank rear ends. 327 C.I. Chevy V-8 with 6-71 G.M.C. blower, four-port injector, finned valve covers and dump tube exhaust. Big Goodyear slicks and wide tires are mounted on six-spoke Silhouette mags. Side lamps and tall top are also included.

Son of Ford – 1932 Model A Roadster. Injected boss 302 E.I. V-8. Moon tank, roll bar, pleated interior and custom steering wheel. Wide ovals and Goodyear slicks are mounted on Starfish mag wheels.

Boss A Bone – 1929 Ford pick-up. Top up or down versions. Olds mill with Hi-Ram manifold and dual Holleys. Wide ovals and Goodyear slicks mount on five-spoke mag wheels.

Hurst Hairy Olds – Two blown and injected Olds engines.

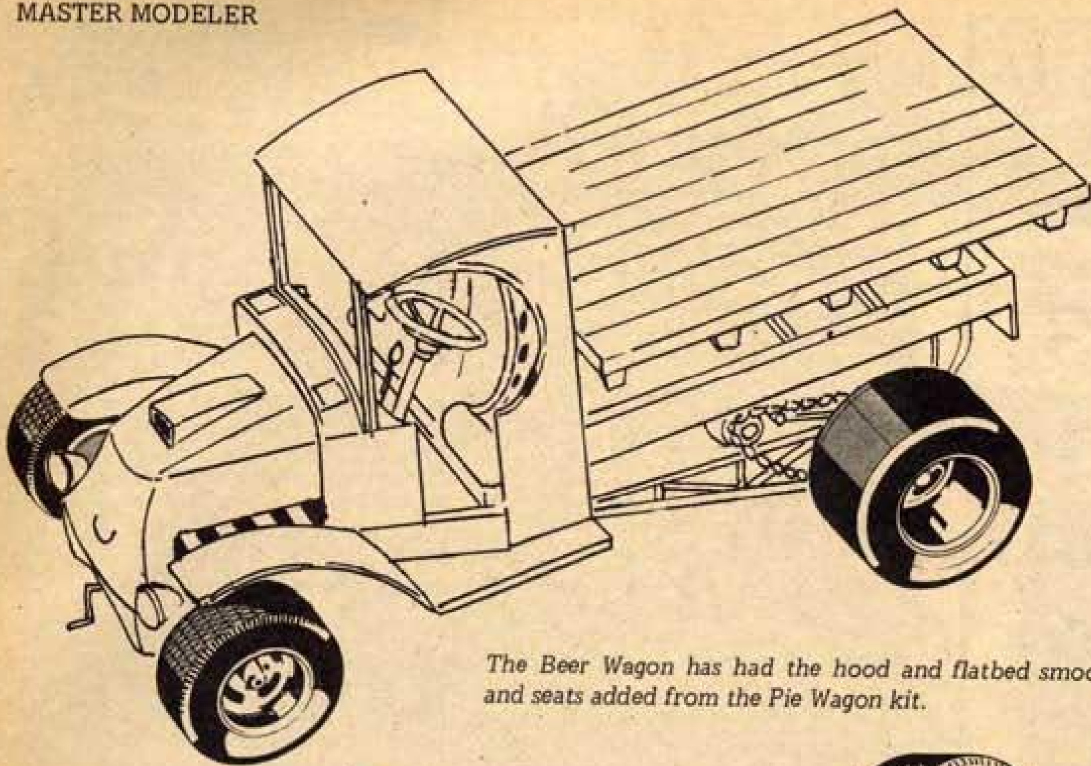
Beer Wagon – Flat bed Mack truck.

Boot Hill Express – Large spoked mag wheels. Hearse body. Skeleton figure included.

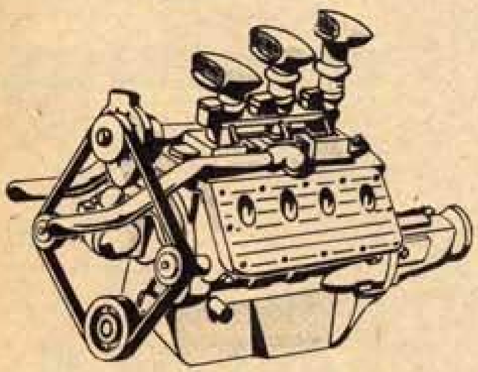
T'Rantula – Ford 427 S.O.H.C. with twin scoop supercharger and zoomie headers. Wire wheels and open Deist chute.

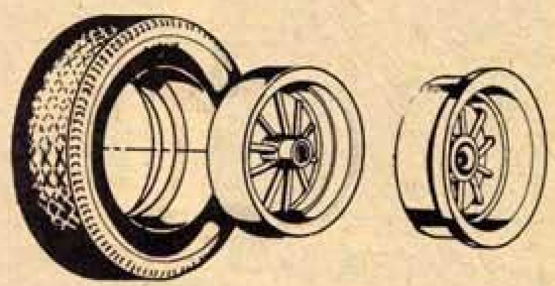
Sizzler – Dragster and Bantam bodies. Chevy and Chrysler engines.

Red Baron – Custom 'T' body with modified six-cylinder Mercedes engine.

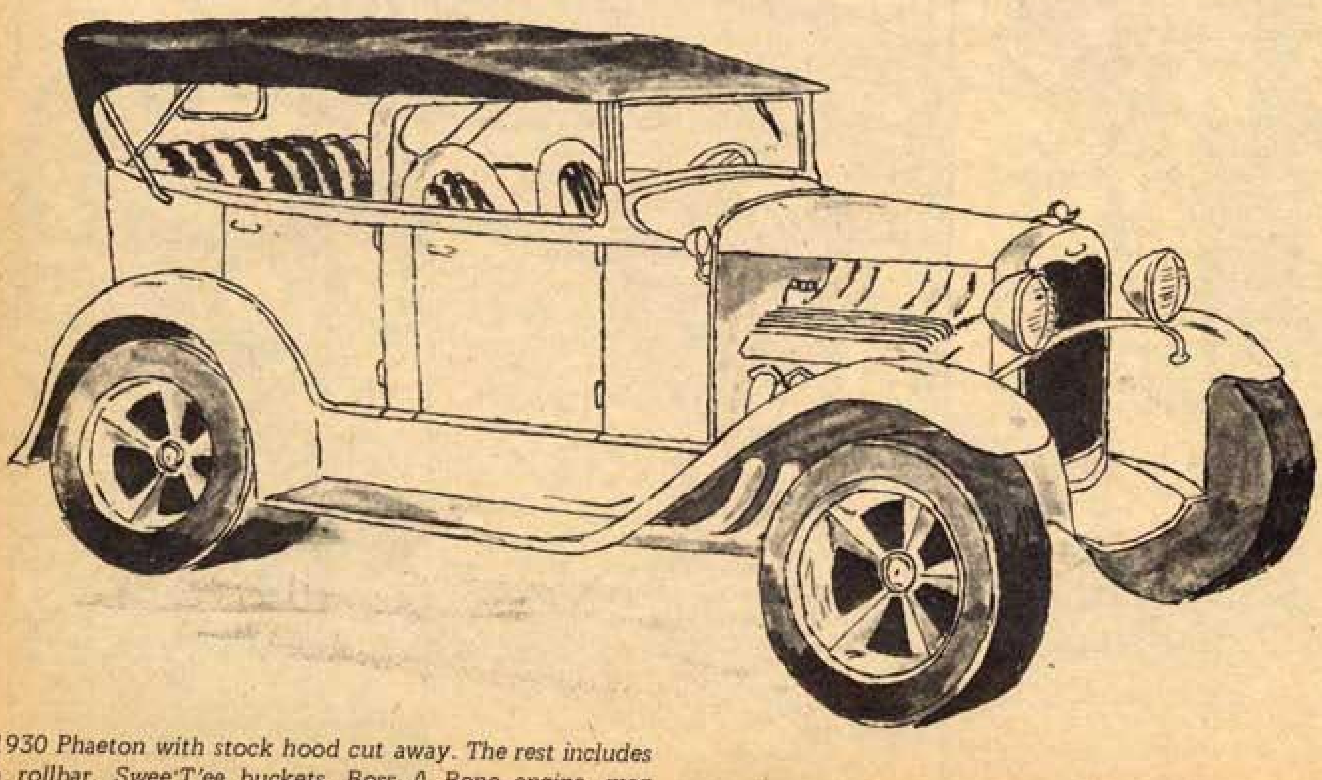


The Beer Wagon has had the hood and flatbed smoothed and seats added from the Pie Wagon kit.





The Pie Wagon kit includes this nicely detailed engine and spoked wheels. The manifold from this engine can be used on other flatheads or the entire engine in any of the early chassis.



1930 Phaeton with stock hood cut away. The rest includes a rollbar, Swee'T'ee buckets, Boss A Bone engine, mag wheels and a chopped top.

TECH SHEET *Continued from page 6*

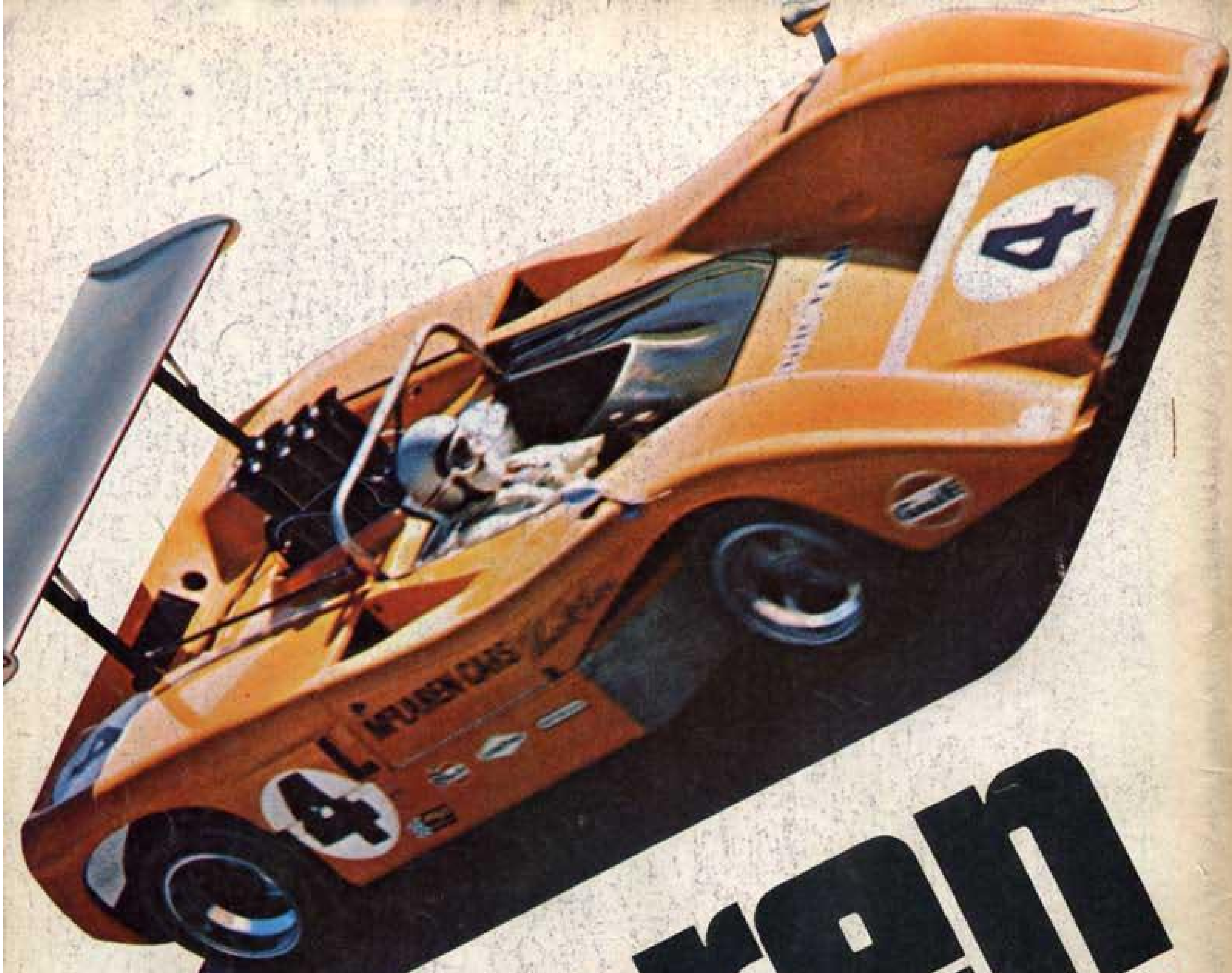
siderably. So, I made a believer out of him. But, it really comes down to the fact that a good track configuration makes all the difference in the world when it comes to handling.

I do have a tip to pass on about some handling characteristics with regards to the Mura solid pan now being sold. It seems to work out pretty well on the Tyco car after you manage to get it adjusted to the correct height for your particular track conditions, but I saw the possibility of modifying it slightly and hinging the whole pan at the rear of the chassis and it works real well. The pan then becomes just one big droparm and it works equally well on flat track or on gently banked curves, such as my track has, but don't expect the car to take steep banked curves like the Monza's.

As I've said a long time ago, the modern H.O. cars are capable of speeds far in excess of what the existing track configurations will permit, so now we need new track sections before we get faster cars.

The whole trouble stems from the fact that manufacturers of H.O. equipment still think of H.O. cars as toys, instead of real racing jobs, and until they change we will not have really competitive high-speed layouts.

Now here's news that's really hot! There's a brand new slot racing newspaper on the market called "Miniature Auto Racing." This paper is crammed full of information, photo stories, charts, race reports, etc., about H.O., 1/32 and 1/24 racing. You'll find NAMRA and HOCCI reports, and N.C.C. reports from all over the country, tuning articles, chassis construction photo stories, etc. And it's written by the top names in the slot racing field. Photos are superb, and the quality of the paper is excellent. The cost? Peanuts! Get this, a three-month subscription sells for $1.00, six-months, $2.00, or 12-months, $4.00. What's beautiful about the paper is the fact that there's no "lead time" – in other words, you get news while it is still hot (races that took place the tail end of May, for instance, are in print in just five days or so, and that goes for the chassis construction articles, etc.) You see what the pros are running just a few days after they solder the things together, themselves! If you're interested, and who could possibly be otherwise, send $1.00 for your three-month subscription (or $2.00 for six-months, or $4.00 for a year) to Pacific Publishing Group, P.O. Box 1821, Thousand Oaks, California 91360. Tell'em ol' Uncle Tom sent you. It's about time we got an up-to-date newspaper of our own. It's sold by subscription only, so don't look anywhere else for it.



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